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Photographs by M. Rosenfeld

Start of Express Cruiser Class in New England's first speed boat regatta. In the foreground, *Chris-Craft No. 4*, the winner, taking the lead.

New England Enters the Speed Boat Lists

First National Regatta on Dorchester Bay Attracts Large Fleet and Results in Close Finishes

By HERBERT L. STONE

TO the popping of numberless exhausts, to the droning of motors turning at high speed and the staccato barrage of countless outboard engines, the first motor boat regatta of national importance in New England was successfully run on Dorchester Bay, June 17th and 18th. Despite the fact that it was the initial invasion by the speed boat of the land of the sacred cod and the sail boat, the good people of Boston and vicinity turned out in goodly numbers to view this new sport. And if at first they were somewhat mystified as to what it was all about, before the two days of racing were over they were enthusiastically urging their local representatives on to victory, and it looked as if speed boat racing would become a fixture on the waters where heretofore sail reigned supreme. From which it should not be inferred that sail is about to disappear from the locality where sailing was invented, but rather that a new use besides that of convenience and pleasure has been found there for the high speed power boat, and that hereafter power boat racing will make the same appeal to those who want thrills with their sport that it does elsewhere.

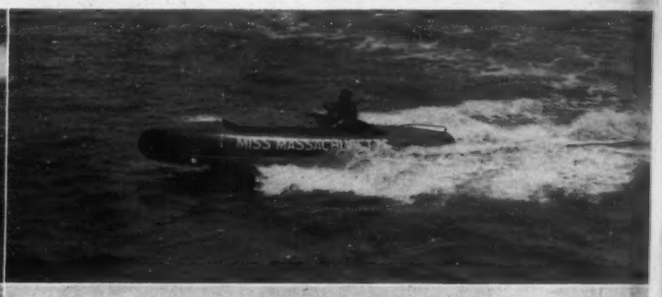
After several months of intensive work a representative fleet of fast boats from various parts of the country, even from as far away as Los Angeles, filled most of the recognized classes that are raced in the United States. There were good fields in the 151-Class, in the Express Runabout Classes and in the numerous outboard classes, which are so rapidly growing in popularity. Only in the unlimited sweepstakes class was the field small, but even here the four fliers that showed up, headed by R. F. Hoyt's *Imp*, from New York, were remarkably consistent in their performance and were evenly divided in the final point score. "Gar" Wood was expected to have two of his *Miss Americas* on hand to do some of the seventy-miles-per-hour stuff, and there was general disappointment when they did not turn up.

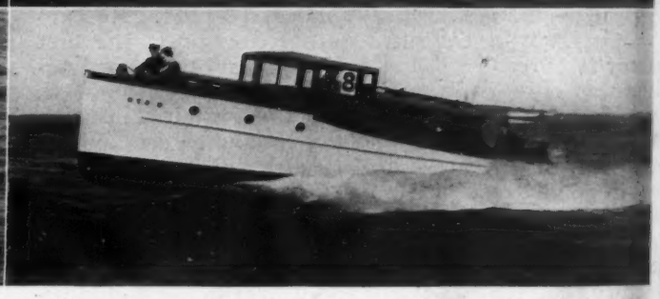
In the sweepstakes class, the contestants were *Imp;* J. J. Dunne's *Miss Hopatcong;* J. H. Rand's *Lady Spitfire*, and *Rainbow IV*, now owned by S. B. Dunsford. *Imp*, driven by that veteran campaigner Victor Kliesrath, won the first two heats for the Gold Cup sponsored by Governor Fuller. At times *Imp* showed great bursts of speed, but "Vic" was content to keep her nose out in front and did not run the little boat's head off. In the last heat he got tangled up with some driftwood, and finished in last place, but at that his two wins gave him the Cup with a total of 1089 points. *Miss Hopatcong* took the last heat and amassed 1050 points, with *Lady Spitfire* only four points behind her in the scoring. All of the boats finished in every heat — the only record that was set in the event.

R. F. Hoyt's *Imp*, winner of the Governor Fuller Gold Cup.

***Esmaral III*, A. D. MacLeod's Los Angeles flyer in the 151-Class.**

The little outboards, of which there was a large fleet on hand, made a big hit. A start in Class C Free-for-All. These boats were racing for the Col. Green trophy.

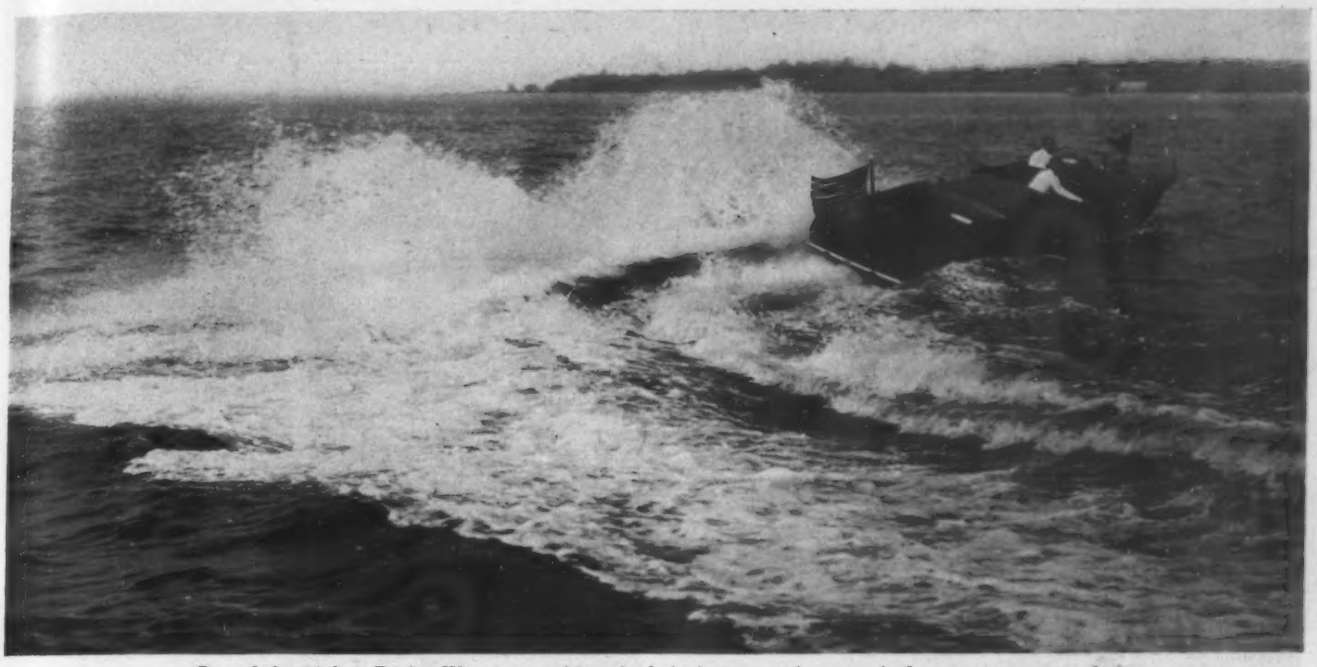




Hacker Dolphin, winner last heat Express Runabout Class. *Miss Hopatcong*, runner-up in Gold Cup sweepstakes, made the fastest time in the regatta.

Hard luck pursued *Miss Massachusetts*, owned by L. T. Savage. Toppan's *Llenroc* took the 42-mile cruiser race in the fast time of 1 hour, 56 minutes.

The officials and members of the R C² who made the first New England speed boat regatta a success.



One of the 26-foot Dodge Watercars taking the hairpin turn at lower end of course at top speed.

FREE-FOR-ALL Sweepstakes for Gov. Fuller Gold Cup.
Three 12-mile heats.

Boat	Owner	Total Points	Time Best Heat M. P. H.
Imp	R. F. Hoyt	1089	45.92
Miss Hopatcong	J. J. Dunne	1050	46.48
Lady Spitfire	J. H. Rand, Jr.	1046	44.52
Rainbow IV	S. B. Dunsford	937	41.54

Imp won first and second heats.
Miss Hopatcong won last heat.

151-CLASS, Free-for-all. Three 6-mile heats.

Miss Spitfire V	J. H. Rand, Jr.	420	41.24
Miss Westchester II	E. W. Hammond	350	36.78
Miss Massachusetts	L. T. Savage	200	37.42
Baby Peerless II	C. Ripp	125	36.24
Miss Spitfire VI	J. H. Rand, Jr.	25	28.42
Little Spitfire	J. H. Rand, Jr.	16	21.44

Miss Spitfire won 1st and 2nd heats.
Miss Westchester won 3rd heat.

151-CLASS — without superchargers. Three 6-mile heats.

Esmaral III	A. D. McLeod	500	37.46
Miss Westchester II	E. W. Hammond	325	36.09
See-Me-Go	H. A. Backus	175	32.59
Baby Peerless II	C. Ripp	100	34.40

Esmaral III won 1st and 2nd heats.
Miss Westchester won 3rd heat.

ONSET BAY SPECIAL CLASS. Three 6-mile heats.

Betty, Jr.	W. E. Moreton	1161	29.58
Lynx	L. Davis	1122	29.08
Splinters	J. MacDonald	524	27.18

Betty, Jr., won 1st and 3rd heats.
Lynx won 2nd heat.

EXPRESS RUNABOUTS — 26/28 feet, not over 150 h.p.
Two 6-mile heats.

Chris-Craft 4	Noyes Marine Co.	761	34.38
Chris-Craft 5	Noyes Marine Co.	648	32.28
Hacker Dolphin	W. E. Moreton	400	35.35
Dolphin De Luxe	W. E. Moreton	361	31.99
Dodge Watercar	B. Lombard	289	30.82
Baby Gar, Jr.	H. W. Lyon	256	29.98

Chris-Craft 4 won 1st heat.
Hacker Dolphin won 2nd heat.

EXPRESS RUNABOUTS — 26/28 feet, 100 to 110 h.p.
Two 6-mile heats.

Harriet D.	W. L. Durland	724	27.92
Dodge Watercar	B. Lombard	400	31.68
Moby Dick	P. S. Rand	361	25.54
Grace Derby		361	28.43
No. 26	Franklin Auto Co.	289	26.30

Harriet D won 1st heat.
Dodge Watercar won 2nd heat.

EXPRESS RUNABOUTS — 22/24 feet, 100 to 110 h.p.
Two 6-mile heats.

Chris-Craft Cadet	Noyes Marine Co	761	29.54
Dodge Watercar	B. Lombard	400	31.89
Baby Dolphin	W. E. Moreton	361	28.77

Chris-Craft Cadet won 1st heat.
Dodge Watercar won 2nd heat.

CLASS B OUTBOARDS — Amateur, 14/20 cu. in. Two 3 mile heats

Hot Dog	H. R. Mattocks	685	16.87
Miss Hartford		557	16.08
No. 153		400	17.01
Wahoo	J. H. Aron	225	13.06
Miss Lockwood	F. Wiggiesworth	400	17.39

(*Continued on page 111*)

The smaller the boat the greater the thrills. Start of Class B outboards.

Photos by M. Rosenfeld

The new Ten-Meter Class in their first race on Long Island Sound. Left: *Revenge*, owned by F. L. Carlisle, which won most of her early races, and F. S. Page's *Narcissus*.

The Month in Yachting

The New "Tens"

THE most important development of the past month was, undoubtedly, the advent of the new class of 10-meter one-designs, and their getting into action on the Sound immediately following their arrival.

Built in Germany, by Abeking and Rasmussen, they were shipped to Halifax and sailed down from that fog-bound port as soon as they were rigged — which, by the way, took a surprisingly short time. Eight came over in the first shipment and six in the second. I was privileged to sail one of those of the second lot to the States, and on the way down had an excellent chance to form an opinion of the yachts.

In the first place, it can be said that these "Tens" are exceedingly wholesome both in design and construction. From the plans one was led to believe that the boats would be narrow, with rather too long ends. But this was far from being the case. The boats stood up well, and from the cockpit, looking forward, their slimness was not apparent. The only place where they seemed too lean was in the ends, and this was no detriment to their seaworthiness, but it made the leads for backstays and mainsheet a bit cramped. The freeboard, which is much greater than that found on Universal Rule boats of the same size, took away from the apparent length of the overhangs, forward and aft. This freeboard was a great advantage in keeping the decks dry, and in giving full headroom under a flush deck.

As the photographs show, there is rather a long lateral plane. This makes the boats easy to steer in a following sea, and we found that they would handle under staysail alone, and even work to windward under this sail. The mast, some 75 feet in length and hollow, was an unusually fine stick, and although we went to sea without the usual rigging-stretching spin it never gave us any uneasiness, and showed no kinks or twists.

We had a fine chance on the run across to the canal, with the wind east and aft for the run to Cape Sable, and northwesterly for the last 150 miles, so that we could just lay the end of Cape Cod. We were thus only 56 hours from Halifax lightship to Race Point, and 65 hours to the canal. And this in spite of the fact we were not driving, and for 12 hours were under trisail. The boats are easy in a seaway and extremely dry, and yet they slip through the water without any fuss. They did not seem particularly close winded on the passage down, but, on the other hand, we did not try them in smooth water or alongside of any other boats of their size.

In conclusion, it might be said that these boats are proof that a good, wholesome racing yacht can be built, with excellent living accommodations, and good in rough water, without making them slow or "tubby." There is nothing of the "tub" in the "Tens."

And one thing more. Never have I seen a yacht come from the builder's yard as completely equipped and ready for sea as these. Three days after they were put overboard from the steamer they were ready to go to sea, every item of inventory on board, even down to galley equipment, and nothing to be done but sail them.

H. L. S.

A New Rig for the Thirty-Footer *Phryne*

AFTER 23 years of racing one of the famous 30-foot class has appeared this year with a jib-headed rig. The one to make the change was J. P. Morgan, owner of the *Phryne*. As the other owners in the class have not changed the rig, this means that *Phryne* cannot race in the class, although she will be able to sail in the squadron runs of the New York Yacht Club, where the new rig should work to her advantage. The design for the sail plan is by C. Sherman Hoyt.

It is not anticipated that the change will be made by the rest of the class. As a one-design class, in its twenty-third year, it would hardly be worth while.

Power tenders have their uses in yacht racing. J. P. Morgan boarding his 30-footer *Phryne* just before the start of a race.

Gavilan Wins Cuba's National Star Class Title

J. E. GORRIN, of the Habana Y. C., sailed his 1926 International challenger *Gavilan* to a one-point victory over Enrique Gamba's *Mabuya*, of the Vedado Y. C., in the Star Class National Championships of Cuba, held at Cienfuegoe May 20th, 21st and 22nd. Third place in the series went to another yacht from the Flota de la Habana, the *Aurrera II*, of the Fortuna Sports Club, which was skippered by M. de Sena, who represented Habana in the 1925 Internationals on Long Island Sound. Six Stars from the Habana fleet made the long 500 mile trip around the Island of Cienfuegos and carried away nearly all the honors. The only local Star to figure in the prize awards was *Guincho*, sailed by Garrina, of the Cienfuegos Y. C., which finished third in the first race. *Delfin*, sailed by George Elliott Patterson, an American who lives at Habana, made a good showing but did not get into the prize money. She was runner up to the *Ace* in the Bacardi Trophy Series last January. The Regatta Committee consisted of Commodore P. R. Morales, Vice Commodore R. Posso, and M. Elizundo.

International Eliminations Start

Chesapeake Bay's first elimination race was won by the Johnson Brothers, of Easton, Md., sailing their new Star *Undine*. Harold W. Smith's *Mackerel* was second and *Pegasus*, sailed by C. E. Henderson, third. None of the veterans made any showing out of the 13 starters. On Gravesend Bay the first elimination was won by the *Ben Mac Chree*, H. A. Goesle. Parkman, the favorite this year, hit a mark and is now practically eliminated. On the Pacific Coast, at Los Angeles, Commodore Rey Schauer easily won all of the early races from Harry Fisher, who has been transferred to that fleet from San Diego. On Long Island Sound eliminations have not yet started, but the first race of the season was won by Commodore G. A. Corry, sailing *Little Dipper*, the first Star ever built and a winner in her seventeenth year of racing. Adrien Iselin's *Ace* won the second race. The Central Sound Fleet had three days of racing at Southport, Conn. Two races were won by F. T. Bedford in *Colleen*, and Miss Bedford won the other, sailing *Maia II*.

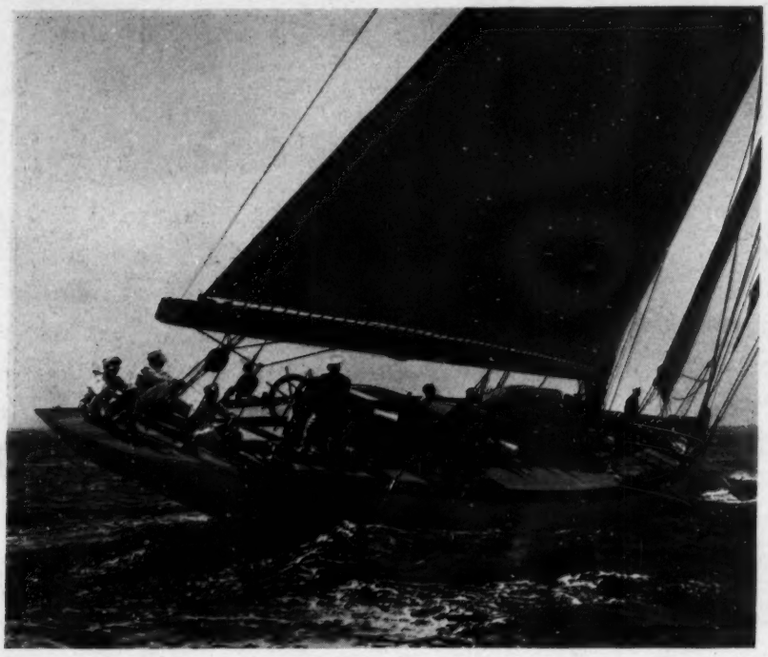
Colonial Yacht Club Opens City House

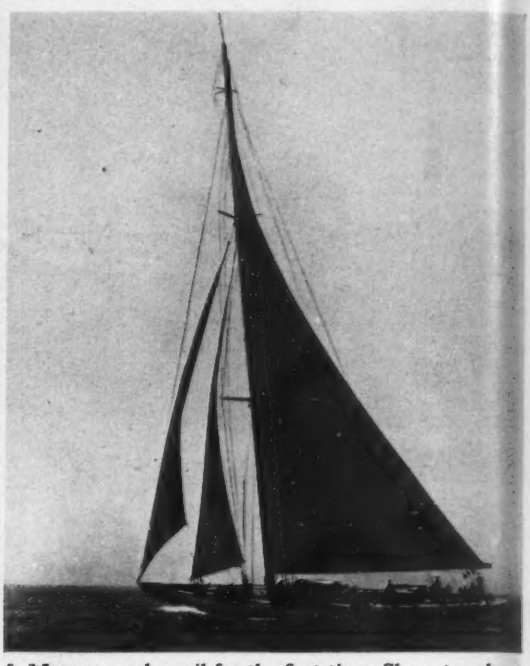
SOMETHING in the nature of an experiment of great interest to yachtsmen was begun by the Colonial Yacht Club of New York with the official opening on May 25th of its newly leased clubhouse at 257 Madison Avenue, New York. In this new home the Colonial will try to find answers to the following questions:

1. Does the clubhouse of a yacht club necessarily have to be located at the waterside?

2. Will a centrally located rendezvous, open to all yacht club members throughout the world, and to others interested in boating, be appreciated by yachtsmen?

The "Thirty" *Phryne* has come out with a new jib-headed rig this year.

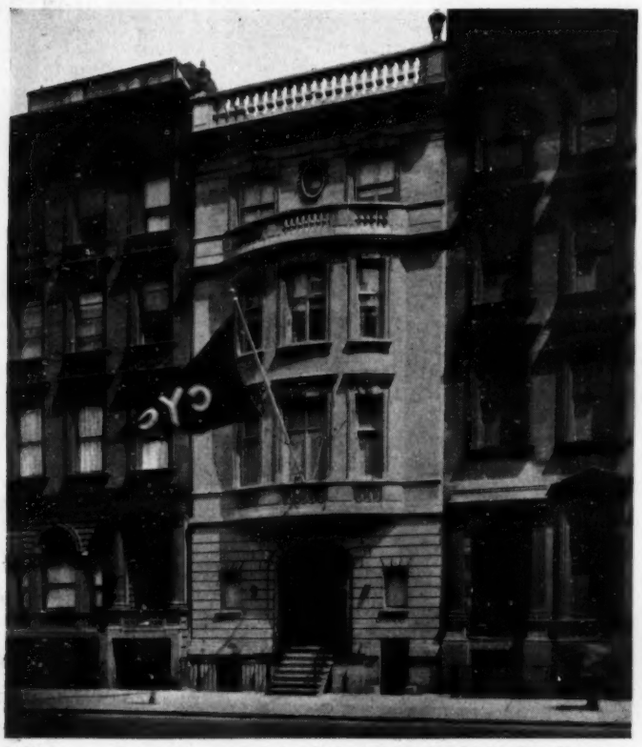




The new sloop *Katoura*, built for Robert E. Tod, from designs by Burgess, Rigg & Morgan, under sail for the first time. She rates about 21½ meters.

The Colonial Yacht Club has two landing stages on the Hudson River, one at 75th Street and Riverside Drive, the other at 152nd Street and Riverside Drive. In the latter location was formerly located the small clubhouse which this organization has used for many years, but which was recently torn down in the course of the work the City of New York is doing to make a riverside park and boulevard along that water front. At 152nd Street the Colonial has now a small club building and marine garage with clothes lockers, gasoline, oil, supplies, landing stages, moorings for its members and a large number of specially marked moorings for visiting yachtsmen. It is planned to duplicate these facilities at 75th Street.

By the time the 75th Street site is ready for building operations, a couple of years from now, the club expects to know whether it is better to have an elaborate clubhouse on the water, the main facilities of which will be used only four or five months of the year, or whether it is preferable to have a comfortable, centrally located clubhouse in the city and only actual yachting facilities at one or more landing places. At the present time the New York Yacht Club is the only yachting organization with a clubhouse in the city. The Colonial plans to hold open house throughout the year for the yachtsmen of the world.



The new city clubhouse of the Colonial Yacht Club, New York.

The reception hall in the Colonial Yacht Club's new home.

Oheka II, a new commuting yacht for Otto H. Kahn. She has made 37 miles per hour.

Oheka II a Fast Boat

APPARENTLY the *Oheka II*, new commuting yacht built for Otto H. Kahn, New York banker, is exactly what her owner ordered. She is what might be termed a "business boat." Intended to make daily trips between Cold Spring Harbor, L. I., where Mr. Kahn has his summer home, and New York, the *Oheka* seems destined to fill the bill as a perfect commuting yacht very nicely.

It is about 35 miles from Mr. Kahn's landing at Cold Spring Harbor to the foot of East 26th Street. Under ordinary conditions the *Oheka* should reel this off easily enough in an hour. She made as much as 37 miles an hour in trial runs at Montreal, and on a speed test down the Hudson, on June 8th, was up to 34 miles at times, before she unfortunately grounded on an unbuoyed mud-flat.

Before the grounding, and under perfect speed conditions, the *Oheka's* three Maybach-Zeppelin engines were humming along in great shape, synchronizing perfectly. The engines are of the VL-2 type, the same kind as are used in airships. They are of 480 horse power each, but are said to develop a total of 1,580 horse power when opened up to 1,500 revolutions. There was little vibration and comparatively little noise as the boat rushed along at high speed. A new system of noise insulation deadens the sound of the powerful engines.

One of the most comfortable places on the new boat when she is running is the 'midship cockpit, which is very roomy and fitted with arm chairs. This cockpit is semi-enclosed but has large windows giving a view on all sides. Roominess is a feature of the *Oheka*. Although she is intended as a day boat there is a good sized owner's stateroom on board, a large galley and a dining saloon seating eight persons. There are quarters for a crew of five. A forward cockpit, near the bow, will hold five persons comfortably and is a very breezy perch when underway.

The *Oheka II* was built at the plant of the Maybach-Zeppelin Company, at Friedrichshafen, where the *Charming Polly* brought over last year for Col. H. H. Rogers, was constructed. She was brought over by steamer to Montreal and then came down under her own power through the canals and Lake Champlain to Albany. The *Oheka* is 73 feet long, and has 12¼ feet beam and 3½ feet draft. Her hull is of double-planked mahogany and her frames of duralumin and oak. She was delivered to her owner about June 22nd.

On the run down the Hudson, which was brought to a premature ending at West Point, *Oheka II* established a record for her class between Albany and Poughkeepsie when she made the run in 2 hours, 3 mins. and 12 secs.

Theodore E. Ferris Designs Diesel Yacht for Vice-Commodore Vincent Astor

ONE of the largest of the new Diesel powered yachts now building is a 264-footer for Vice-Commodore Vincent Astor, to take the place of the 160-footer from which he has flown his broad pennant ever since he has been a flag-officer of the New York Yacht Club.

A picture of this yacht was shown in the last issue of YACHTING. The caption to this picture gave Cox & Stevens the credit as the designers. This was somewhat misleading, as the yacht is the joint product of Theodore E. Ferris and Cox & Stevens. The hull, machinery and construction plans are the work of Theodore E. Ferris, a New York Naval Architect. The firm of Cox & Stevens is responsible for the outboard appearance of the yacht and has charge of the complete interior arrangements.

Valgerda II, a new auxiliary cruiser 43½ feet long, owned by Mrs. Wm. H. Isom. Designed by Wm. Atkin, she was built by T. A. Kyle.

British Racing Notes

By MAJOR M. HECKSTALL-SMITH

AT the meeting of the Council of the British Yacht Racing Association, at which the report was received that the International Rule for yachts of six, eight and ten meters had been formally adopted by the North American Yacht Racing Union, an important decision was also arrived at. It was decided by the Council that the British delegates on the Permanent Committee of the International Yacht Racing Union should be requested to recommend that, as from January 1, 1928, hollow masts shall be allowed for the classes above twelve meters. In view of the fact that European racing in these classes is practically confined to British waters, one may regard it as certain that this much needed amendment to the International Rule will be adopted.

At the late conference between American and European yachtsmen, the strong line taken by the N. A. Y. R. U. representatives in advocating the adoption of hollow masts for yachts of ten meters and under, led to the alteration in the International Rule which now permits their use on yachts up to twelve meters. Messrs. Clifford D. Mallory, W. A. W. Stewart and Clinton Crane had, of course, no mandate to deal with the rules for yachts above ten meters, but, from conversations I had with them when they were in London for the conference, I feel sure that they will be in full sympathy with the recommendations of the Y. R. A. Council.

In view of the proposed visit of Commodore Tod's *Katoura* to British waters next season, the Council's recommendation that the rule shall be revised in time to allow for the building of new yachts for next season's racing has met with very general approval on this side of the Atlantic and, I am certain, will also give satisfaction in America. In speaking on the subject to American yachtsmen, it is unnecessary to lay stress upon the great advantages obtained by the use of hollow masts, as they already realize the great saving in weight when a hollow mast replaces a solid one of equal strength. It is probably easier in America to obtain timber for one-piece solid masts suitable for large vessels than it is in England or Scotland, but, in spite of this I imagine that America has been more ready than we have to take advantage of the benefits secured by the use of a built hollow stick. In British yards it has been found increasingly difficult to obtain suitable timber for very large masts, with the result that big, solid sticks have recently been of the "built" variety. The regulation which was in force until May 1st of this year, which allowed only the top third of a mast to be hollow, was intended to save expense. As a matter of fact, it had very little effect in this direction, as the masts produced under this rule cost practically as much as hollow masts.

The question of hollow masts is, therefore, well on the way to a settlement and I have reason to believe that, before *Katoura's* visit to our shores next season, a change will be made in the existing ruling as to the height of sail plans of yachts having the Bermudian rig. As the rule stands at present, a Bermudian rigged vessel must have her sail plan 9 per cent lower than one of an equal length on load waterline rigged with a gaff mainsail and normal topsail. In view of the prospect of international racing in the larger classes, I feel certain that American yachtsmen will welcome a modification in the existing rule which will put Bermudian rigged craft on an equal footing with those having a gaff mainsail and topsail, as regards height above the deck level.

A typical Morgan Giles National 14-foot dinghy. Four of this class will be sailed on the Sound this season.

The 14-Foot Dinghy Class

An outstanding feature at the various yachting centers around the British coast, and also in inland waters during the coming season, will be the racing in the National 14-foot Dinghy Class. The National 14-footers will have a particular interest for Long Island Sound boating men, as four of these wonderful little craft have been shipped out to America from the yard of their designer and builder, Morgan Giles, of Teignmouth, in Devonshire. These boats have been built to the order of four of the leading Long Island Sound yachtsmen and I hope — and think — they will give a good account of themselves in their new home. Judging by the extraordinary popularity of the class in England over a long period of years and under all conditions of weather, I have little doubt that the new boats will make good. In England we regard the class as, perhaps, the best possible school for young helmsmen and, as the "Fourteens" are so shortly to be on trial in America, it may be of interest to give a short description of the type.

As the name implies, they are 14 feet over all and the fastest boats in the class usually have about 4 ft. 9 in. beam and are about 1 ft. 10 in. deep amidships. The boats are entirely open and are built of 5/16-in. mahogany on timbers spaced 3 inches apart. The center plates are of bronze, about ¾ inch thick, and weigh about 135 pounds. The "stripped" hull weighs about 235 pounds and the spars (which are of selected bamboo), rigging, rudder and blocks, about 55 pounds. Buoyancy tanks must be fitted,

(*Continued on page 96*)

Saramar II—A 1927 Power Cruiser

In this new cruiser, one of the first of the 1927 fleet to take the water, John H. Wells has turned out an unusually handsome and able boat for Charles T. Fisher, Esq., of Detroit. She is 106 feet in length and her power consists of two Winton gasoline motors, which drive her 15 miles per hour.

In accommodations and fittings *Saramar II* is the "last word" in large power yacht design. Robert Jacob, Inc., was the builder.

The Pleon Yacht Club's Fortieth Anniversary

The Oldest Juvenile Yachting Organization in America, and the Forerunner of the Junior Yachting Movement, to Celebrate This Season

By LEONARD M. FOWLE, JR.

IF you should happen to visit Marblehead this summer, you will undoubtedly notice a red and blue burgee flying from a tall white staff high up on the rocks at the end of the south wing of the Corinthian Yacht Club. That flag is the burgee of the Pleon Yacht Club, the oldest juvenile yacht club in America; and a portion of that wing is the clubhouse of this organization.

The junior yachting movement in the United States is generally considered to be of comparatively recent origin. It is really since the Great War that the idea gained impetus enough to become general throughout the country. However, it is forty years since a group of youths living on the neck and town shores of Marblehead Harbor founded the Pleon Yacht Club. This summer the club is planning a fitting celebration of its fortieth anniversary.

The Pleon Yacht Club was founded in the summer of 1887. Its first commodore was the late Arthur G. Wood, who remained actively interested in the welfare of the little club from the time of its founding until his death this spring. No visitor who remained long at Marblehead could have failed to become acquainted with this genial man, and the famous fleet of *Snails*, sailed by himself and his children, have long been a familiar sight, with their red topsides, sailing about Marblehead Harbor. The *Snails* were always small boats, and the interest of the Pleon's first flag officer was always in the small craft and their skippers rather than in the racing of larger boats.

The Pleon was founded only two years after the Corinthian Yacht Club, and that club has always remained its unofficial parent and guardian, although no actual bonds connect the two organizations, and the Pleon takes pride in its individuality and freedom. The club was founded for two reasons. The first was to encourage the spirit of sportsmanship and fair play among the youngsters of each succeeding generation and to promote the sailing and racing of small boats. The second motive was less altruistic. Many youths were either too young or could not afford to join the existing clubs of the day and, therefore, they decided to form an organization of their own. To this day the Pleon has provided for such youths; but with the advent of the junior memberships at the Corinthian and Eastern, and the founding of a rival organization, the Junior Eastern Yacht Club, the modern youth often belongs to all four clubs.

Arthur G. Wood was the commodore of the Pleon from the time of its founding in 1887 until 1902. The original fleet of the club consisted of four boats, all under 21 feet over all — *Snail*, the flagship, *Glide*, *Rheba*, and *Mole*. For a number of years the club had active racing in two classes, keel and centerboard boats; and these early founders started the custom of an annual cruise on Massachusetts Bay each season, which has been recently revived.

The word "Pleon," from which the club takes its name, is derived from the Greek, the word in that ancient tongue meaning sail, or sailing. The club's burgee was designed by Frederick L. Rhodes, who also designed the flag of the Corinthian Yacht Club. The Pleon pennant is half blue and half red, the blue above the red, with a white star in the center of the pointed burgee.

Among the other early members of the Pleon Yacht Club were William I. Palmer, Charles H. Taylor, William O. Taylor, Henry A. Morss, John Dunlop, Harry W. Perry, and Willard Jackson. Many of these men will tell you the interesting story that the Pleon Yacht Club is really older than the Corinthian and is, in fact, its parent. There may be some truth in this story, although it has never been substantiated. It is quite possible that some unofficial organization from which the Pleon grew existed before 1887, but that date seems to be the one destined to go down in the club's history as the year of its founding, on the authority of its first commodore.

After 1902 the organization practically went out of existence for a short period. In the latter part of 1905 another junior club was organized, the Ajax Yacht Club, under the leadership of Irving Poole, William K. Burlen, Donald R. DeLoriea, and A. O. Mason. Early in 1906 this club, which specialized in the racing of sailing tenders, was persuaded by Arthur G. Wood and other Pleon members to change its name to the Pleon Yacht Club. Under this name it flourished for several seasons.

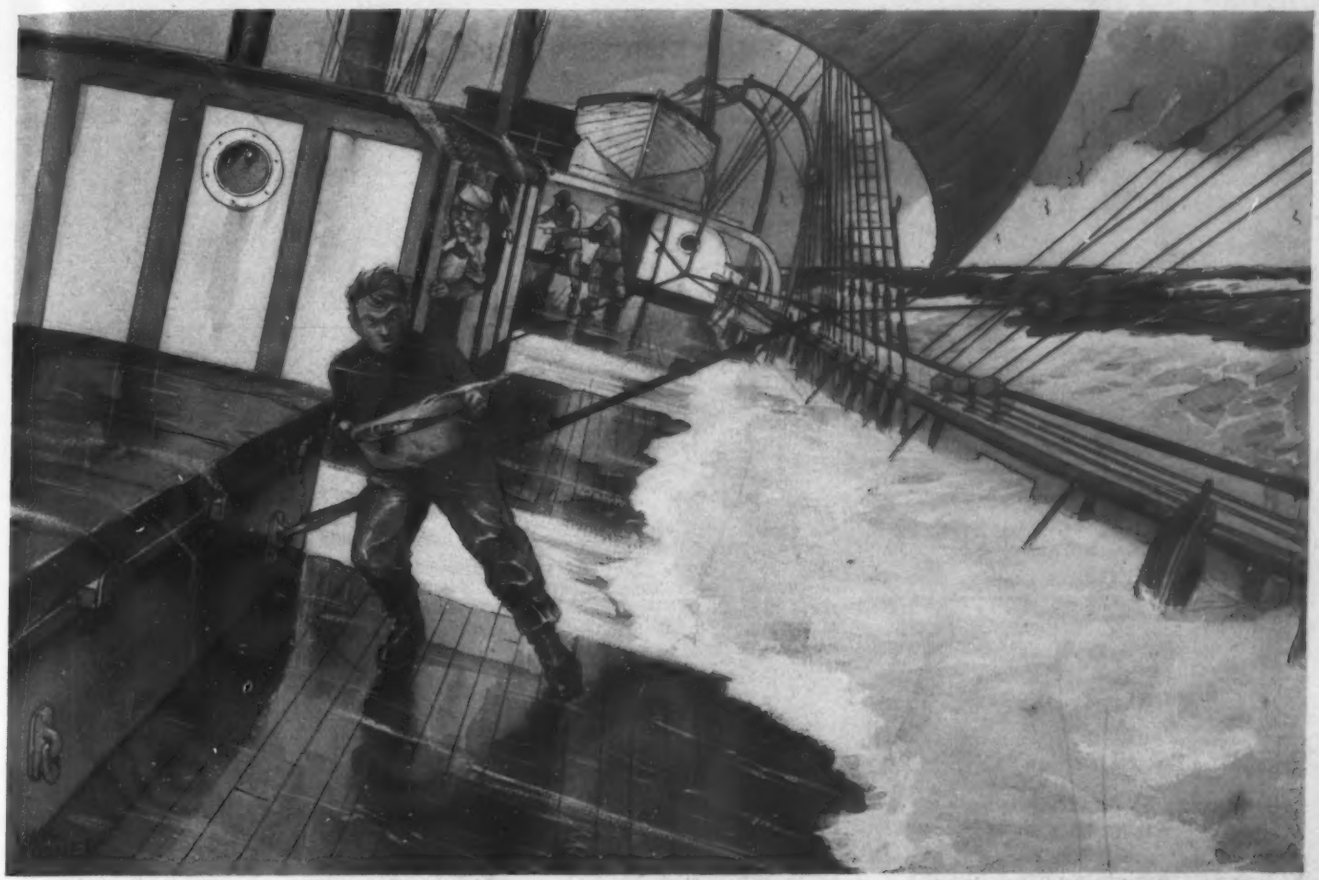
About 1911 the club came under the protectorate of three men, all now deceased, who began the work of moulding the Pleon into the organization that it is at present. Two of these men were former officers, Arthur G. Wood and Donald R. DeLoriea. The third was the late Henry Appleton Knowles. Many interesting cruises and entertainments were held for the Pleon aboard the latter's power cruiser, *Gardenia*.

Under these men, and the two successive commodores, William V. M. Fawcett and S. Wolcott Booth, the club grew as never before. Three classes of boats were raced, decked boats, open dories, and a novice class, of different types. The membership more than doubled, and the Corinthian Yacht Club began to take an interest in the little club. Several of its members offered trophies for the Pleon races. It was a great day in 1913 when the Pleon classes were placed on the Corinthian mid-summer schedule and a still happier one when they were recognized a couple of years later as a regular class in all the club's open racing.

Then came the war. It was the death knell, for the time being, of the Pleon Yacht Club, but its classes managed to survive. In 1918 there was a place made for a single handicap class, known as the Pleon Yacht Club Class, in the informal races of both the Corinthian and Eastern Yacht Clubs. At the same time the clubs recognized a small class of funny-looking square-sided catboats, designed by W. Starling Burgess, for the youngsters of Marblehead. These boats, destined to become the most popular one-design class on the North Shore, were the famous Brutal Beasts. The recognition of them was to add another class to Pleon after the war.

Although the war put a stop temporarily to the activities of the Pleon, its brightest days were ahead of it. It was revived in 1919 with the aid of former commodores Arthur G. Wood and S. Wolcott Booth. David C. Percival, Jr., was elected commodore. Racing was provided for two classes, Brutal Beasts and handicap. Strange as it may seem, the Beasts were the club's first one-design class.

In 1920, Richard S. Thayer succeeded to the commodoreship, and the club entered on its greatest period of growth.



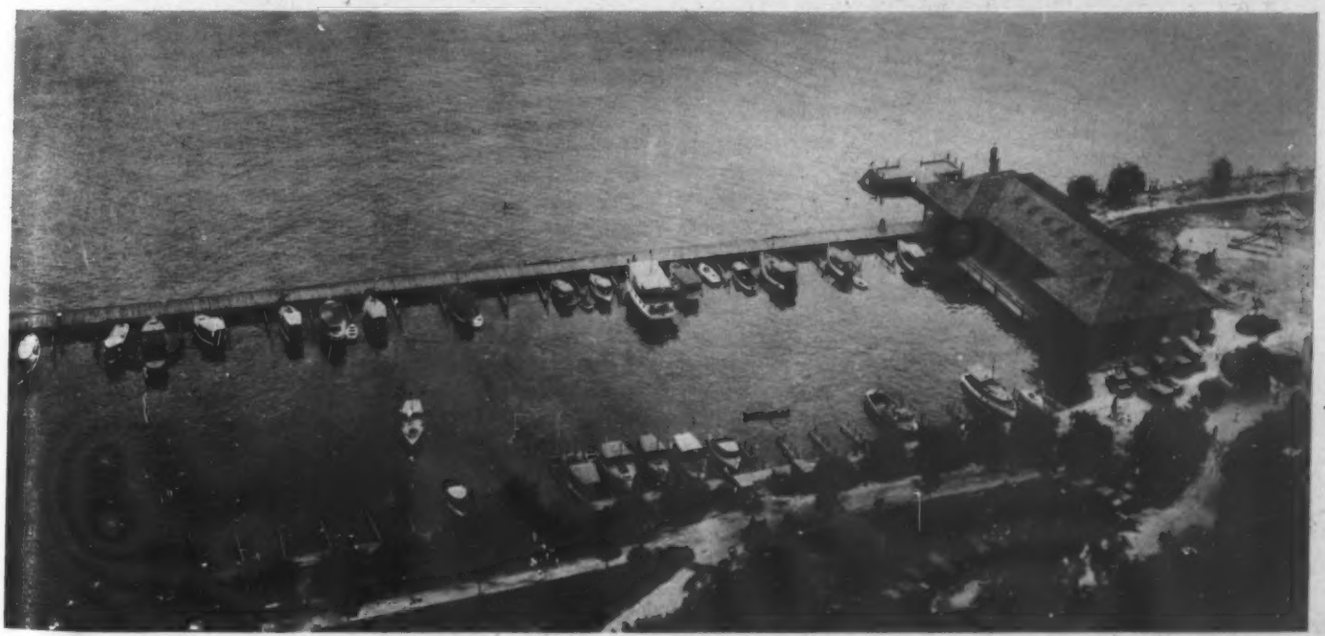
Taking the crew's mess kid forward! The ship's boy has a hard job in rough weather. From a drawing of life on a windjammer, by Charles Rosner.

Starting with a club of some 35 members, he left it with over a hundred. Under his leadership the club had an almost unbroken string of successes afloat, especially in team racing.

In 1921 the Eastern Yacht Club offered the Sears' Bowl for the first junior championship. Quite fittingly the Pleon commodore, entering the series as an unknown quantity, carried off the first junior championship for America's oldest junior yachting organization, and the club and its commodore became known from Maine to Cape May.

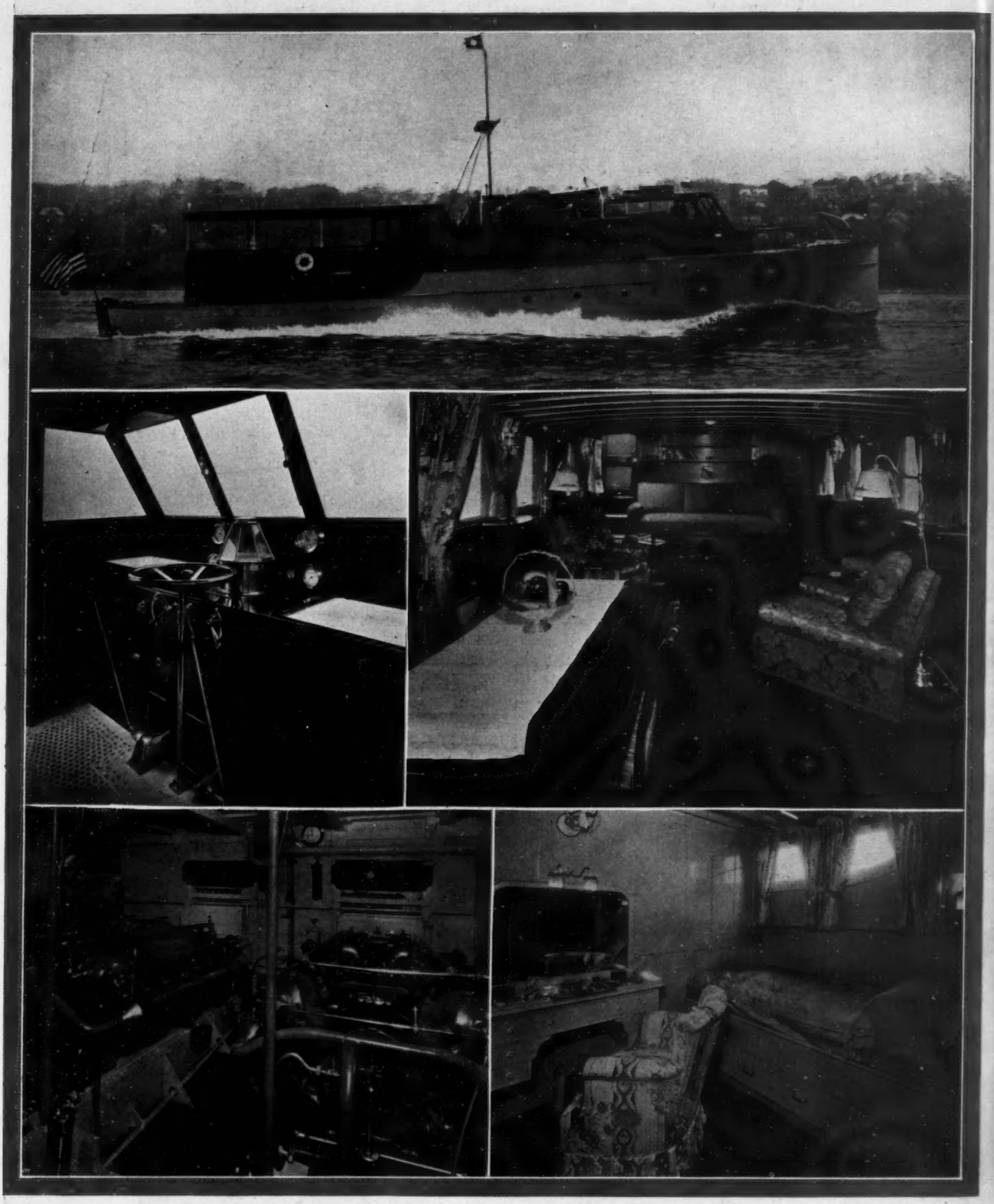
"Dick" Thayer was not able to sail to victory in two succeeding championships, but in 1924 his tutelage pro-

(*Continued on page 108*)

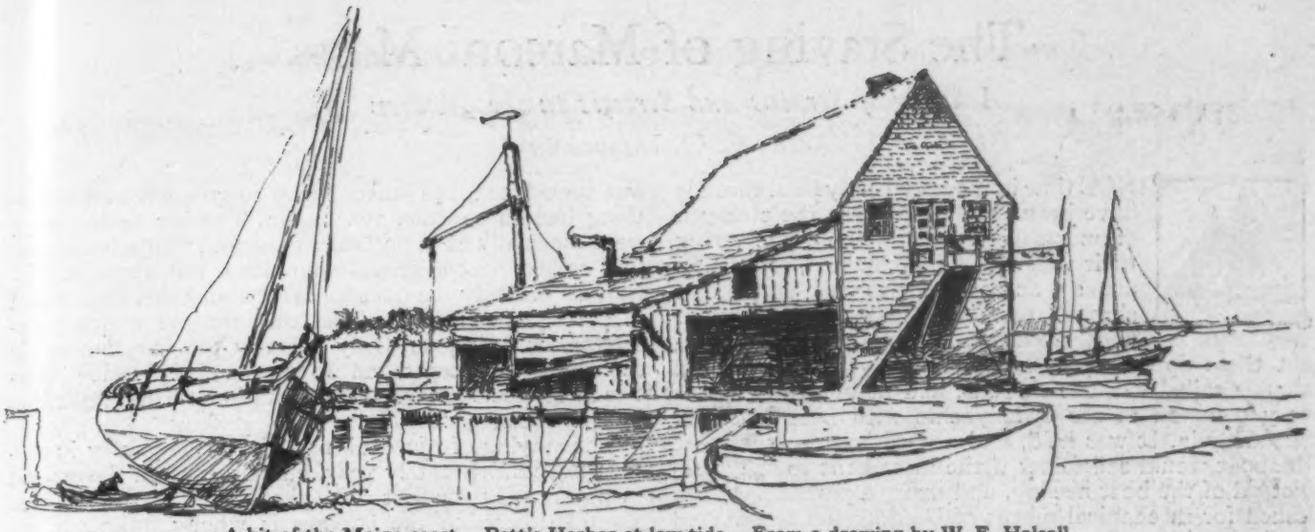


Why cannot the City of New York provide basins on the Hudson for the safe mooring of small craft like this one at Edgewater, on the New Jersey shore?

Lone Star — A New Express Houseboat Cruiser



Another of the express houseboat cruiser types turned out by the Consolidated Shipbuilding Corporation is the *Lone Star*, built for George Galt Bourne, of New York. With a speed of 29 miles per hour, attained with a pair of Wright Typhoon motors, this yacht has the room and comforts of the houseboat and a speed making her capable of fast commuting service. The pictures show the pilot house control, the spacious deck living room, one of the double staterooms and the engine compartment.



A bit of the Maine coast. Pott's Harbor at low tide. From a drawing by W. F. Halsall.

The New (Old) Staysail Rig

Showing That the Rig Brought Out by "Advance" in 1925 Was Used Seventy Years Ago

By C. G. Davis

THERE are a few old shellbacks still alive who can recall the hubbub created in maritime circles in 1841 when Captain R. W. Forbes invented a new way of rigging topsails on square riggers and brought out the ship *R. W. Forbes*, rigged with her topsails cut into two separate sails. Then, in 1854, Captain Frederic Howes, of Brewster, Mass., came out with a similar rig on the ship *Climax*.

The Forbes rig had the topmast fidded abaft the lower mastheads, although some ships had it rigged with the topmast forward, in the usual way; but in each case both yards hoisted up, the lower yard sliding on the doublings at the masthead. In the Howes' rig, which is the rig that survived and was commonly spoken of as the double-topsail rig, and is still in use, only the upper topsail hoisted up and down, the lower topsail yard being permanently swiveled by a goose-neck (or crance iron) at the cap on the head of the lower mast.

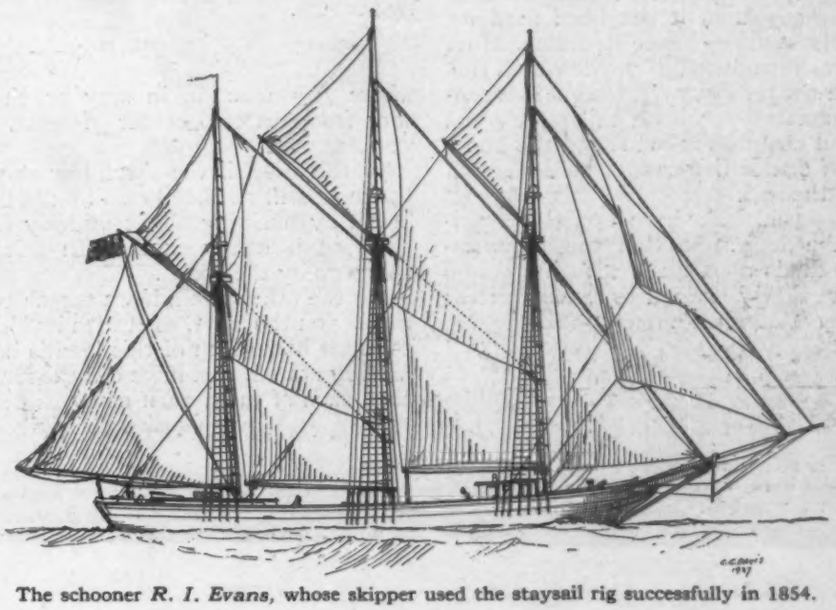
The advantages and disadvantages of these rigs were still a bone of contention when the writer was going to sea, and lengthy arguments were common, some of which, in the early days, were carried on in the newspapers.

But there are few persons aware of the fact that at that early date Captain Forbes also invented a staysail rig for schooners, doing away with the heavy hoisting gaff foresail and mainsail on three-masted schooners and substituting in place thereof two staysails between each mast, which were the forerunners of the modern staysail-rigged schooner yacht.

In Volume II, page 101, of John Willis Griffith's book, *The Progressive Shipbuilder*, there is a cut of this rig, similar to the accompanying illustration, which shows how the three-masted schooner *R. I. Evans* was rigged in 1854. Captain Taylor, her skipper, in reply to a query from the inventor as to how he liked the rig, replied that he had made six voyages to the West Indies with the *R. I. Evans*, that the rig was everything that could be desired and that two men could handle any sail on the schooner, even in the hardest weather.

The fore and main lower staysails were set loose footed, but held out by light booms; the upper staysails were sheeted just as the ordinary topmast staysails, with a sheet down on each side. The topsails set above the upper staysails were sheeted out to a light boom pivoted against the mast head with vangs, just as a spencer gaff on a ship was rigged.

Coming across the description of this craft brings to one's mind that old saying: "There is nothing new under the sun."



The schooner *R. I. Evans*, whose skipper used the staysail rig successfully in 1854.

The Staying of Marconi Masts

A Study of Strains and Stresses in the Modern Rig

By C. O. Liljegren

SINCE time immemorial, stays and shrouds have been used to increase the strength of masts and spars without increasing their weights. We yachtsmen, especially, are so accustomed to see stays and shrouds on every mast that it seems hardly possible to imagine a mast without these appendages. Yet to this day many a fishing boat is sailed without shrouds, and at one time it was very common to see even yachts with bare masts in Scandinavia. It was held, and not without reason, that the boat would sail faster if the mast bent to the gusts instead of the boat heeling, and many a patent has been issued for mechanical means of bending the mast. Well do I remember these old-time yachts. They were fairly narrow and their masts were tremendously thick — so thick, in fact, that they seemingly occupied the entire width of the deck.

Being so thick, these masts were, of course, very heavy, far more so than the entire rigging of a modern yacht with the same sail area. Consequently the boats were

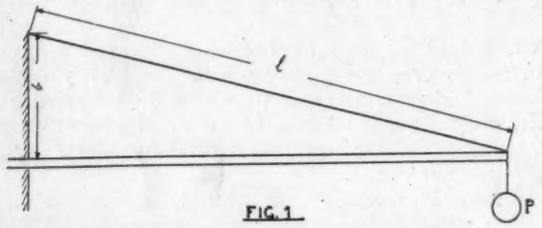


FIG. 1

cranky, and lost more from the weight of the mast than they gained from an imagined smaller angle of heel. And that settled the question.

With the now almost universal adoption of the long Marconi, or rather Bermuda masts, on racing yachts, the correct staying of these spars has become a matter of prime importance, not only to the yacht owners who face the bills, but to the sport of yachting in general. To see a mast go by the board leaves a feeling of helplessness to all concerned, and lessens the ardor for sailing in yachts with such a rig. Although the Marconi mast is held to be a modern innovation, it has been used for hundreds of years in Bermuda — hence its name. More than 50 years ago it was introduced in Sweden by a rich dentist and nicknamed the *toothpick rig*, for obvious reasons. It was used in connection with a roller reef, and in harbor the entire sail could be rolled round the boom like a roller curtain. Of course this cannot be done with the modern full cut of the sails.

The staying of masts has hitherto been a purely empirical matter, with all the drawbacks that the name implies. From seeing hundreds upon hundreds of masts go overboard, shipbuilders slowly learned to dimension the different parts correctly. But when a new type of rigging was introduced, the masts began to go anew and everything had to be done over again. The big sailing ships were especially hard on their spars, and things became so bad at last that a special committee was appointed by Lloyd's to study the question. But about this time steam began to supersede sail, and the question was left unsettled, or nearly so. Only recently the question of rig scantlings has been taken up by the classification societies in connection with the International Rule for Racing Yachts in Europe.

The staying of Marconi masts is not only very important but unfortunately very difficult, both in theory and in practice. In the first place the nature of the load that should determine the stresses is wholly unknown, although we might estimate the total load in pounds from the stability of the vessel. In the second place, if several stays be fitted to a mast, the whole arrangement becomes *statically indeterminate*, as it is called in bridge and crane work, which means that the stresses cannot be computed in the ordinary way but only by considering the elasticity of the whole fabric. Such computations are

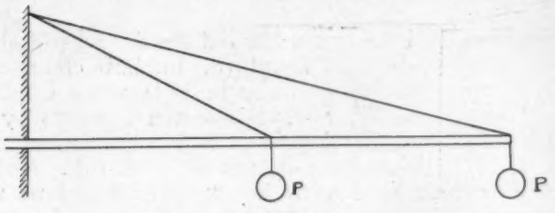


FIG. 2

naturally far too intricate for our purpose. Hence, to simplify our task, we shall assume *the mast cut at the points of support* but still held in place by steel bands, etc., so that the different parts are always in alignment. Corrections, if necessary, can be made later.

A mast with its shrouds and stays is, in fact, a crane or a strut. This will be more evident if we place the mast in a horizontal instead of a vertical position, as in Fig. 1, with only one stay fitted. If a load, P, is attached to the outer end, the strain on the stay can be easily computed by the rule,

$$R = P \times \frac{l}{b}$$

where R= reaction in stay or shroud, l= length of stay from deck to center of mast, b= halfbreadth of vessel at mast.

In this case, if the shroud or stay be strong enough, the mast will not bend at all but will act as a strut, and break by buckling about midway from deck to stay if the load is heavy enough. In this very manner most masts go by the board.

On the other hand, if we attach two stays at different heights on the mast, each with its load, P, we are at a loss to know how much of this load is borne by each stay, as already stated. But if we cut the mast at the lower stay, then each of them must carry its own load although the

(*Continued on page 94*)

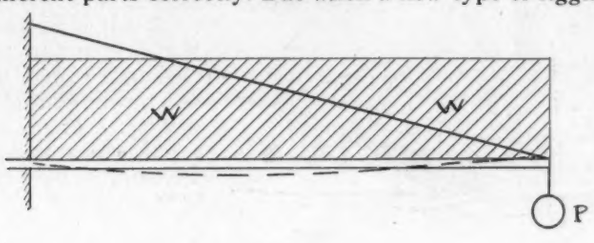


FIG. 3

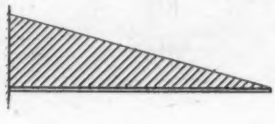


FIG. 4

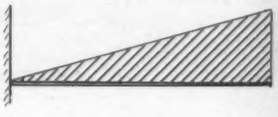
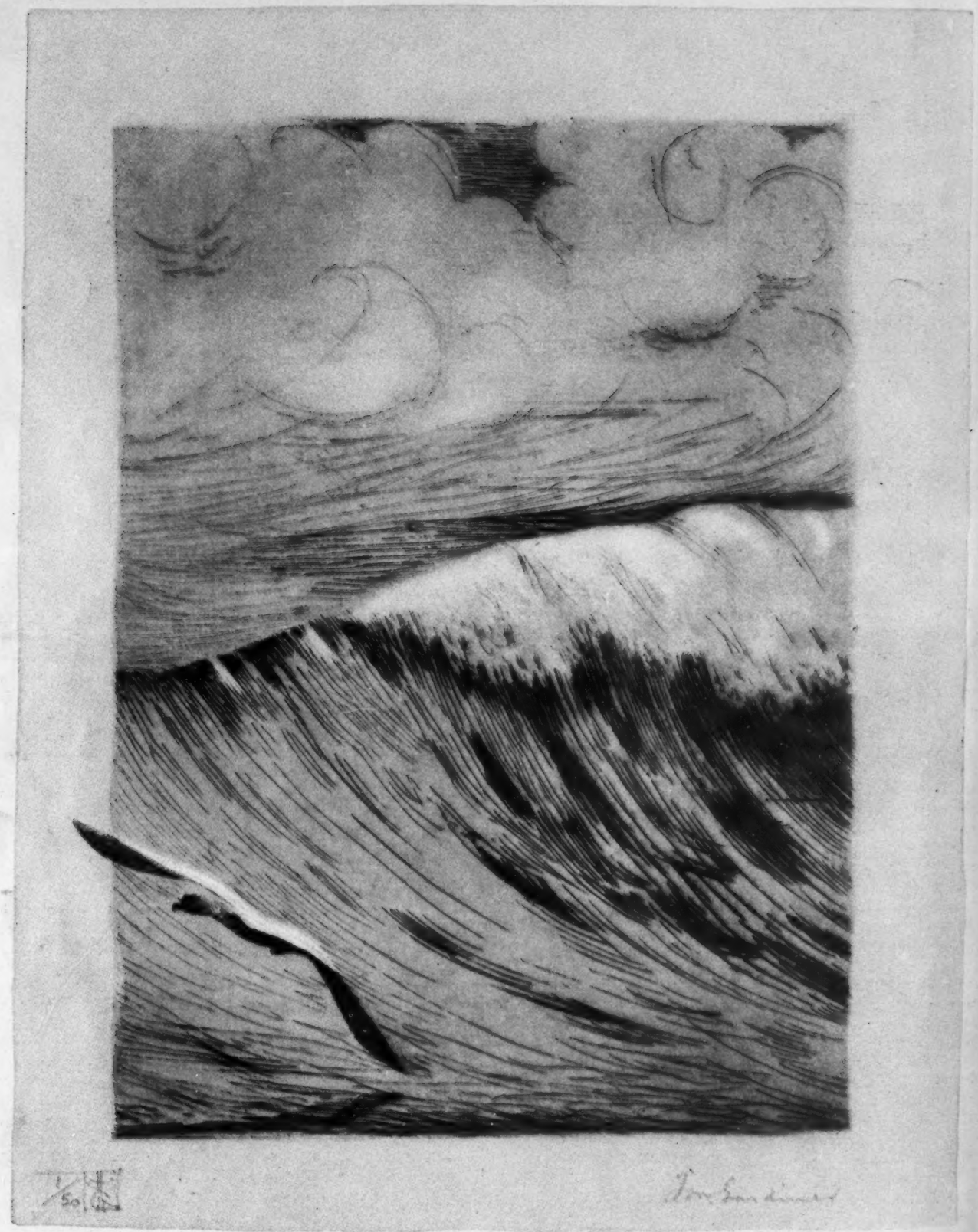


FIG. 5

Photo by E. Galloway

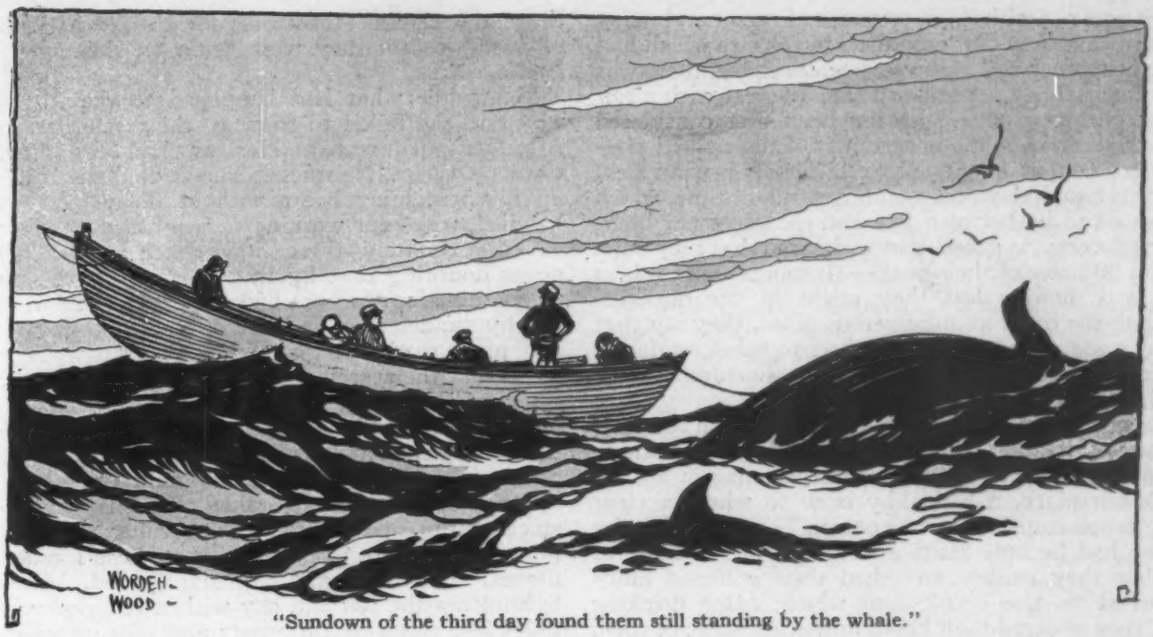
WITH STUNSAILS SET ALOW AND ALOFT.

The old Navy training ship *Monongahela*, with yards squared in a light breeze.



THE WAVE.

From an etching by F. M. Gardiner.



"Sundown of the third day found them still standing by the whale."

Convict Castaways of the Okhotsk

A Chapter in the History of the Whaler "Charles W. Morgan," of New Bedford

By CAPTAIN JAMES A. M. EARLE

AS TOLD TO GEORGE M. SHEAHAN, M.D.

ON this old whirling ball of rock and water and life of ours called the Earth, things sometimes happen which seem to be in no way related; and yet the future proves them bound together by a chain of circumstances long and strong enough to span the breadth of oceans and continents. To a thoughtful man they seem important and interesting evidence bearing on the problems of fate and of free will.

Of such a nature were the adventures which, in 1890, befell the crew of an American whaleboat in the Sea of Okhotsk, a vast arm of the Pacific whose waters wash at once the shores of the mighty islands of Saghalin and Yezo, the savage Kuriles, the lonely Kamchatka peninsula and the Siberian wilderness.

In mid-September of that year the *Morgan*, then commanded by Captain Layton, was cruising in a part of the Okhotsk, roughly speaking, about 100 miles distant from Cape Siratoka, a high and woody headland of the southern portion of the island of Saghalin and the easternmost point of the shore. They lowered for right whales and after a hard chase the fourth mate fastened to a hundred-barreler, which, turning out to be a fish of surpassing vitality, started off with them to windward (the north) at terrific speed, leaving the other boats, and the *Morgan* herself, far astern in the haze and powerless to help. In less than an hour he "took them completely out of town," as whalers say, and they were alone in the sea. It was then nearly noon of a sunny, though by no means clear day, with a strong breeze and a lively sea.

The afternoon passed swiftly, ending in a bloody struggle, and it was well after sundown, with darkness overhanging, before the whale was killed and the boat's crew had time to consider their position. They were not worried, however, believing implicitly that the ship would soon pick them up, so they took the usual steps to secure their valuable prize, cutting a hole in the flukes and passing a line through, all in readiness to run to the ship on her expected arrival. The boat keg was opened, lantern taken out, lighted, lashed to the mast at a distance of about twelve feet above the thwart, then the mast was stepped and those tired and hungry men, their duty done for the time being, turned to and "ate hearty."

The night dragged by without a sign of the looked for lights, daybreak came — and another long day and night of patient waiting passed, and yet another morning and afternoon. Sundown of the third day found them still standing by the whale, rising and falling and rolling in the long Pacific swells, but with no sign of a vessel to gladden their anxious eyes.

Their situation had now become serious, the third night away from the ship was close upon them, the supply of food and water was of course limited; not over fifteen gallons of water and six pounds of hardtack had been carried in the boat and on these six men had now subsisted for over 54 hours. They took counsel together and agreed to abide by the decision of their officer, fourth mate Joseph Martin, a native of the Azores and a most capable man — he was later my third mate on a long and successful voyage.

All things considered, it seemed sure that their ship had lost them and that waiting any longer for her wou'd be both dangerous and futile. Certainly no one could say that they had not fully performed their duty. The chances of being picked up by other whalers were slim, for they knew well that there were but two other ships besides the *Morgan* on that 500-mile ground and that almost certainly they were cruising to the eastward. Somewhere about 100 miles to the west lay the convict settlement on Saghalin, guarded by soldiers and capable officers. With good luck they could make it, there obtain food and water and, perhaps, transportation to the Japanese coast and civilization.

Still, it was not without deep pangs of regret and many misgivings that they cut loose their huge prize which had cost them so much toil and weary waiting, but there was no help for it. They set sail and steered west with a fair wind, a southwest course having been first considered and rejected owing to the uncertainty of their position — a wise decision as events proved. The fair wind held during this fourth day and, making excellent time, which they figured to be between five and six knots per hour, they swept along. At sunset they estimated that they must be within 20 miles of their goal — though no land was in sight — and, fearing lest they might in the darkness come upon the coast at a dangerous point, they lay that night to a sea anchor of oars lashed together, suffering considerably with hunger and thirst. Fortunately for them the weather was not very cold.

At daybreak they resumed their journey, with the good fair wind still holding true, and at eleven in the morning of the fifth day came upon the coast, landing in a carefully chosen place, a little bay close to where a clear running brook emptied into the ocean. Their sufferings by this time had become acute and it was with a sense of relief that they landed, stretched their stiffened limbs and rushed to the brook into which, after drinking deeply, they plunged their heads and arms, some of them rolling and wallowing in the stream itself.

Their burning thirst assuaged, hunger became fiercer and predominant. A search for food was made, but unsuccessfully except for the finding of the seed pods, or buds, of wild roses which grew there along the shore in great abundance, much as they do in many places on our North Atlantic Coast. A sort of low bush huckleberry also flourishes in that part of the world, but is so completely and curiously hidden by a covering of moss that this wholesome natural fruit was overlooked by them; for not one of the crew had ever set foot upon these beaches before. However, they devoured the seed pods, which satisfied their hunger to some extent, rested awhile, and then resumed their voyage, coasting along at a little distance from the shore.

After about three days of this cruising a point was reached where the coast turned definitely to the north, which fact together with the appearance of the upland, and his recollection of the chart, convinced the officer that the shortest route to the convict settlement ran overland in a southerly direction. And there they hauled up their boat which had served them so well, turning her over in a shady spot well above high water mark and carefully stowing oars and sail and gear underneath. Here a stroke of luck awaited them. Hardly had they finished their task before they were hailed by a Russian woodchopper and though unable to converse with him, they readily made their plight known by signs. This good fellow came wholeheartedly to their assistance, faithfully guiding them overland behind heavily timbered hills to the convict station, where, though hungry and footsore, they arrived in fairly good condition without a single straggler, "having kept well together," as they afterwards said. Some disturbances of digestion — not severe — were the only ill effects they suffered, which, considering their diet, is not to be wondered at.

The officers of the military guard treated them like men, they were given a "glorious feed" and good quarters. Later their boat was recovered and rowed to the village of Anawa. The Russian Government even took the trouble to notify the owners in far away New Bedford of its situation, though it does not appear that the boat was ever called for. At the first favorable opportunity they were forwarded to Hakodate. There, through the offices of the American Consul, they were provided with transportation to Yokohama and San Francisco, where they arrived none the worse for their experience. The following season they were again on their way to the Arctic.

Meanwhile what had happened to the *Morgan* and why had she failed to come to the rescue of her men? After her fourth mate and his crew had been taken out of town on their "Nantucket sleighride," the ship picked up her remaining boats without delay, and carefully handled, was kept working to windward on short tacks of approximately three hours each, Captain Layton never doubting that by thus working to the north, in which direction the boat had disappeared, he would raise her by sundown or at least on the following morning. But night settled down, with, as we know, no boat in sight, and the search was necessarily given over for the time and the vessel, under shortened sail, kept on hourly tacks in order to hold approximately the position which she had reached at dark. As was customary in the whale fishery when boats were lost, to guide them back to the ship again, the cover was taken off the tryworks, smokestacks put up and the iron basket swung between the two pipes; in it a fire of blubber scraps was kindled whose flames, constantly and abundantly fed, blazed high, lighting up the sea and sky with a red glow visible for miles and throwing the masts and sails into a gleaming relief against the blackness of the night — a fire which was faithfully tended until dawn.

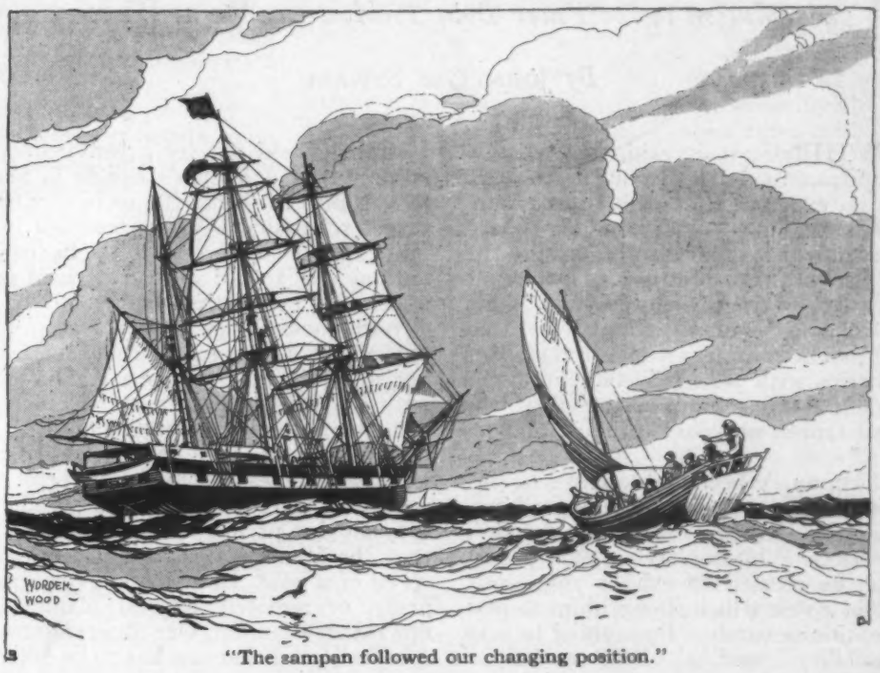
In the morning glasses were again brought into play and the search resumed, after some debate about the probabilities. Two courses were open to the captain; a correct or mistaken choice would mean, in all probability, the safety or loss of his missing men. The whale had disappeared to the north and it is a well known trait of these huge animals to follow a true course. On the other hand he had been wounded, and might have turned to the eastward in his eagerness to escape, since the general habit of whales had always been to work out of the Okhotsk at this season of the year. Following, then, this latter theory, as in his opinion most probably correct, Captain Layton stood out on a long tack to the eastward, but of course without result. Then there was nothing to do but to resume short tacks to the westward until dark, which was done. Again they shortened sail and again the blazing blubber illumined the ship and the sky. That night was an anxious one for all on board, and the following morning their worst fears appeared to be realized. Further quartering of the sea seemed useless, so the search was abandoned as hopeless, with a gloomy conviction of a stove boat and lost crew. This conviction was strengthened when later the *Morgan* spoke the *Cape Horn Pigeon*, Captain Scullun, who had seen no trace of their men, but who was asked to maintain a sharp lookout nevertheless. Both vessels resumed their whaling and it was long before the truth was finally made known to them.

The daring voyage of the whaleboat and its successful ending, as might be expected, made a deep impression on the imprisoned men of Saghalin. A sudden and exciting break in their dreary routine, it became the subject of discussion and speculation, and was, beyond question, directly responsible for the bold and successful attempt of ten convicts to escape three years later, an episode in which, as in the foregoing adventure, my vessel, the *Morgan*, took a leading part.

Saghalin being an isolated island outpost of the great Siberian wilderness, with the few routes of communication thoroughly controlled, attempts to escape were considered certain to fail, and for this reason discipline, though on the whole pretty severe, was considerably relaxed outside the walls. Then, too, the long and often severe winters and the method of heating the huge buildings by wood burning brick furnaces (by the way, I have

more than once seen the tops of these used as sleeping quarters), called for enormous supplies of wood, so that wood cutting parties were of necessity a frequent occurrence. It was not a very difficult matter when in the woods for a man to stray away from his gang; if he had saved something out of his ration of rice he might be able even to delay a return until a round-up. The authorities never paid a great deal of attention to these absences (unless they were prolonged), having no doubt of the straggler's ultimate return to the fold.

Thus, at the end of about a fortnight, though every one of them was shackled to a ball and chain, ten men slipped away one by one, and succeeded in accomplishing a rendezvous, bringing for weapons a few axes, for food a store of rice painfully saved out of the daily ration, and for garments the clothes they wore. By Herculean efforts, the details of which we were never able to obtain, and at the risk of mutilating injury, all but two, whose leg bands were proof against the axes, succeeded in removing their shackles. Their boat was at hand, a rough sampan 20 feet in length by eight feet in the beam, three feet from gunwales to the floor, built of four inch planks laid flat and then laboriously hollowed out with adzes to a thickness of two and one half or three inches at the center, with sharp flaring bow, and forward raking stem sticking up at an angle well above the gunwales, rude spruce oars, three on a side with thole pin and becket to each, but no sail. In this vessel, equipped as described, they embarked, as they afterward told us, "for the mainland of America," that statement being the sum total of their plans and knowledge.



"The sampan followed our changing position."

On September 10, 1893, the *Morgan*, under my command, was following her business of right whaling about 200 miles east of Siratoka, main topgallantsail and courses set (easy sail, her usual cruising rig), the weather at the time hazy, the temperature moderate and a fine fresh breeze blowing from the southwest. She was taking a final long survey of that part of the Okhotsk before working to the eastward to complete her cruise and start on the long voyage home. At 9:00 A.M. two right whales were raised about half a mile to windward. We lowered four boats and gave chase, the whales working slowly to windward, but perfectly at home, the boats working back and forth trying to come upon them from behind, and the ship following the boats, sometimes under full sail and sometimes with foreyard aback, watching the whales, and signalling information. Whaling in those days was a combination of sport and business, with the business end never to be lost sight of — a fierce excitement the sporting proposition, a practical need of turning a profit the business proposition, and a close attention to the hunt essential to success. So, being completely wrapped up in my task, I had at first taken little notice of a sail reported to me shortly before, to the southwest, running before the wind, and showing, as it came more clearly into the field of vision, the outlines of a sampan.

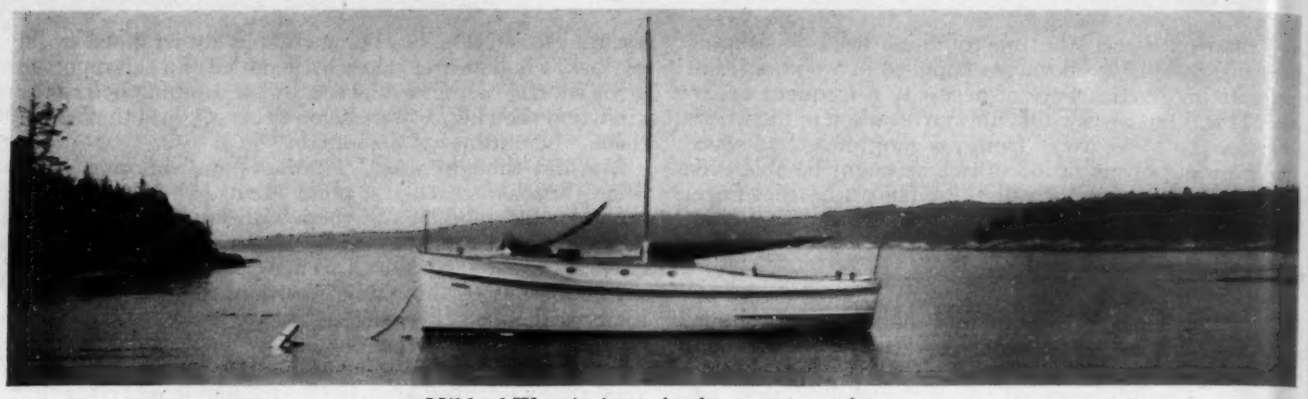
My first thought was: "That's a Jap fisherman," but when they had reached a point about one-half mile distant I took a good look at them with my long glass. "No Jap about that boat, ten men, all dressed alike in dirty gray shirts and trousers." Then the truth struck me rather forcibly — those uniforms were reminiscent of the road workers chain gang at Vladivostok — they were escaped convicts from Saghalin. They followed our changing position tenaciously, altering their course each time that we tacked after our boats, and it was clear that they had every intention of coming alongside.

All this time I had been in the crow's nest conning the boats to the whales. The convict sampan was rapidly closing up the gap which separated us, and I had no means of knowing their intention — it was clearly imperative that I should be in command of the situation if they meant mischief. So I slipped down the backstay, put my favorite six shooter (Old Trusty) in my pocket, and instructed the hands on deck to allow none of the gang aboard if they came alongside. I also issued orders to pass them water if they were in distress. One of our crew, luckily, was a Pribiloff native, and him I detailed to talk with the fugitives. I then returned to the crow's nest to resume the direction of the whale hunt, planning to deal with the castaways after the return of my boats. The sampan came alongside peaceably enough, the Russian hailed them, passed a line and slacked them off astern. In answer to the frantic call for water, which was their first demand, a bucketful was passed down and they drank greedily.

Having thus relieved their immediate distress, and being assured of their safety and our own, we resumed the chase in earnest. But luck was against us that September day, for in about a half hour's time the boats gallied the whales and away they went. Some time after we saw them spouting far to the eastward. Meanwhile I set the flag for the return and when the boats were hoisted and the crews aboard, I ordered the mate to haul the sampan alongside and get the story.

After bobbing up and down on the swells and smashing one of the stern windows with their long prow in their eagerness to get aboard, they came in on the lee side up the ladder, taking extreme care of their mast and sail as they disembarked, which puzzled us a little at the time, lined up on deck soldier fashion, removed their headgear and saluted. They were a wild and savage looking crew,

(*Continued on page 84*)



Mildred IV, swinging to her home port mooring.

Mildred IV

A Solution to the Power Boat Problem in Maine Waters

By John Ives Sewall

VERYTHING, it is said, has a background; and the background to *Mildred IV* is experience, mostly unpleasant experience, in ordinary motor boats, many of which I found to be unsuited to my use in Maine waters. I make no pretense to being a hell-roarer, or other species of dare-devil seagoing scoundrel, and I feel that I have never put a motor boat to an unfair test; yet, after taking several trips with Jere Wheelwright in the earlier *Mildreds*, I found myself apprehensive at the start of a motor boat cruise, nervous during it, and relieved when it was over.

A year ago last autumn, Wheelwright wrote to me, asking if I thought it possible to design a really good motor cruiser. I replied, "If you had any brains, you wouldn't talk about motor cruisers. Why don't you get a decent auxiliary?" Although he refused to exhibit any sense, Wheelwright replied in a vein which showed him to possess the spirit of scientific research: "I am going to take a chance on the possibility," said he. "Will you help?" I experienced a glow of sympathy at such an exhibition of sporting spirit, put away my scruples, and lent what enthusiasm I could to the project.

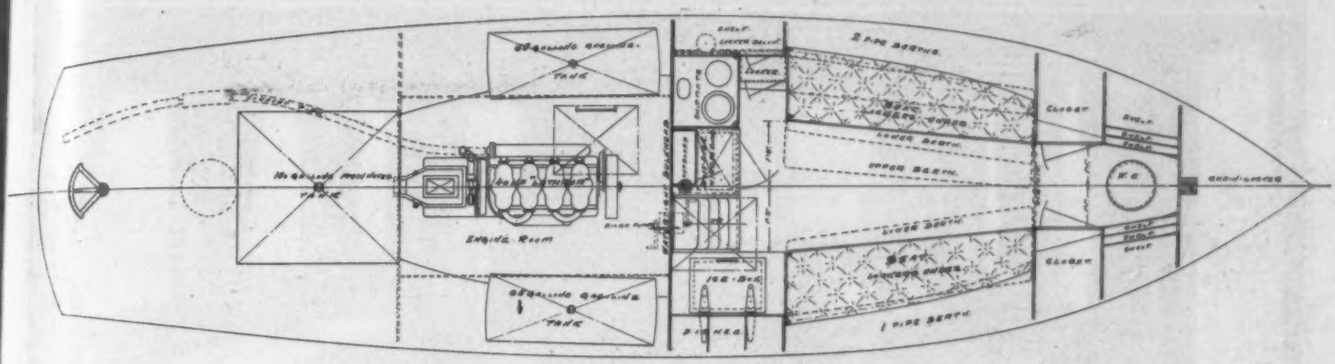
Our first object was to produce a boat which would, in the last analysis, be fundamentally safe. To this end, we decided to have a large chunk of iron on the keel. I am willing to hold out for iron on the keel of *any* cruising boat, even for shoal draft boats like *Alice*. Perhaps the "shoal drafters" won't capsize, but no one can be sure just what is going to happen when queer waves pile up. It is patent that a boat with fixed ballast under her stands more chance of doing the Humpty-Dumpty stunt if knocked down, than does the boat without such ballast. Of course, inside ballast can be, and often is, fixed in place; but it takes up room, and probably is less satisfactory than the iron shoe.

A corollary to the iron shoe was a watertight cockpit, with ample scuppers. Few, if any, owners are drowned for lack of self-bailing cockpits. But Wheelwright and I were picking our boat rather than our weather. A third essential to a safe launch is an absolutely reliable engine. Wheelwright had previously used fast turners in his boats. These had not, on the whole, caused much trouble; but I strongly held out for a heavy duty machine, on the ground that a launch's engine is her prime and only mover, hence it behooved us to sacrifice almost anything to get reliability. As it turned out, we had to sacrifice quite a lot of cabin room to the big engine. But there was nothing else to do; we had decided upon nervous relief under way rather than bodily comfort at anchor.

With these things in mind, we went on to the model of the boat. Neither of us could tolerate codfish bows, or hog sterns. Sweet lines, we would have. So into the middle went the heavy engine, and the large tanks; this arrangement permitted sweet ends and also gave us the advantage of keeping both ends light. To our mind, no lines were sweet unless they were powerful enough to meet the work they were intended to do; the simple force of need, they say, is a principle of beauty. It was, and is, our belief that the stern sections are the critical sections in the speed of a boat. In a slow moving cruiser that does not plane, or remotely suggest planing, the run must be fine rather than flat. Our observations of boats with flat runs indicated that one has to be getting out from under before the flat run exhibits any marked superiority, or becomes at all desirable. Mr. S. H. H. Parsons, in designing the power cruiser *Dawn*, had used a deep, fine run, with the result that *Dawn* ran clean, and on an even keel, at the speed of seven knots for which Mr. Parsons designed her. So much for the stern.

While we did not like codfish bows, we felt an equally strong hatred for the anaemic bows of many of the contemporary American motor boats. These lack buoyancy, and, I am sure, contribute almost not at all to the speed of the boat. (I am talking, of course, about boats that go less than ten knots.) They have the further disadvantage of dictating weak sections and lack of stability clear aft to the midship section — a very apparent fault on any course where a boat must roll. And then there is the harsh corner where the toothpick bow swings into the brutal stern. We would have none of it and declared that this new boat should have a much fuller bow than custom dictated.

Since we wanted powerful sections and, at the same time, easy sections, we had to have deep sections that sit *in* rather than *on* the water. This adds displacement, and detracts from the speed; but, since the overall length

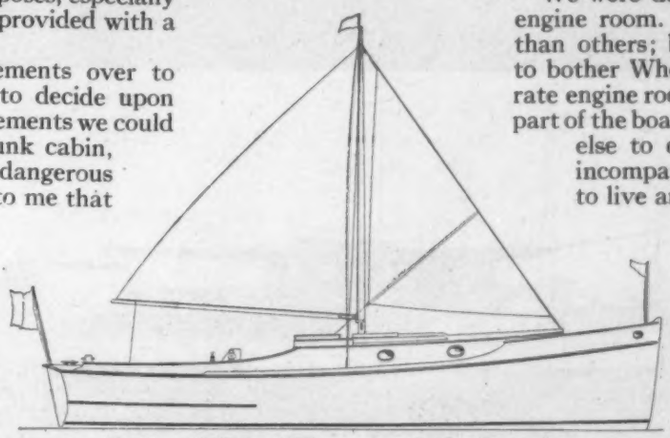


The interior layout of *Mildred IV*.

of something under 35 feet would make rather high freeboard necessary, this feature rather appealed to us, since it tended to balance the above and below water parts of the ship.

Finally, we wanted a long keel, in the interest of easy steering. The longest keeled 35-foot boat will turn short enough for all practical purposes, especially if she be under power, and provided with a large rudder.

We turned these requirements over to John Alden, and went on to decide upon what cabin and deck arrangements we could work out. We wanted a trunk cabin, of course. Raised decks are dangerous to work on. It is a wonder to me that the first raised deck cruiser did not annihilate the idea then and there. A gain in cabin space (to a degree), but no security for getting anchors, nor room to sit, stand, or move forward of amidships, and of questionable appearance. As our plan worked out the boat is certainly about as high forward as she would be with a raised deck; but she is unquestionably better looking, and the high rail forward makes this part of her a paradise in the eyes of any raised deck sufferer.



Profile of *Mildred IV*, showing the auxiliary rig.

In the interest of utility we asked for some substantial towing bits, one on either quarter. Alden drew in a windlass, and some real guard rails, which latter make it a delight to slam into docks. It is said that Wheelwright had a lot of good, clean fun trying out his guard rails, but, personally, I never saw him do it. Guard rails are a great satisfaction, and I recommend them to everybody. Personally, I rather like the looks of them and even if I didn't, the trouble and paint they save would still prejudice me in their favor.

We were determined to have a separate engine room. All engines smell, some less than others; but *all* engines smell enough to bother Wheelwright and me. The separate engine room certainly takes up the best part of the boat; but there was really nothing else to do: we and the engine were incompatible, and yet both sides had to live and operate on the same boat, so the simplest thing to do was to let each have its private sphere of anarchy.

This engine room is the real thing. There is ample room to do anything you want to any part of the power plant or its auxiliaries. You can all but stand up. The tanks on either side hold enough gas for quite a run, while the shelves hold more tools and truck than it will be possible for Wheelwright to so much as lose, even if he lives to be very old. We tried to ventilate this place by two windows opening through the after bulkhead into the cockpit, and by a large cowl ventilator led to the bilge; but this does not do well enough to suit us, and we plan to install some "suckers" of the simple type Jack Hanna devised

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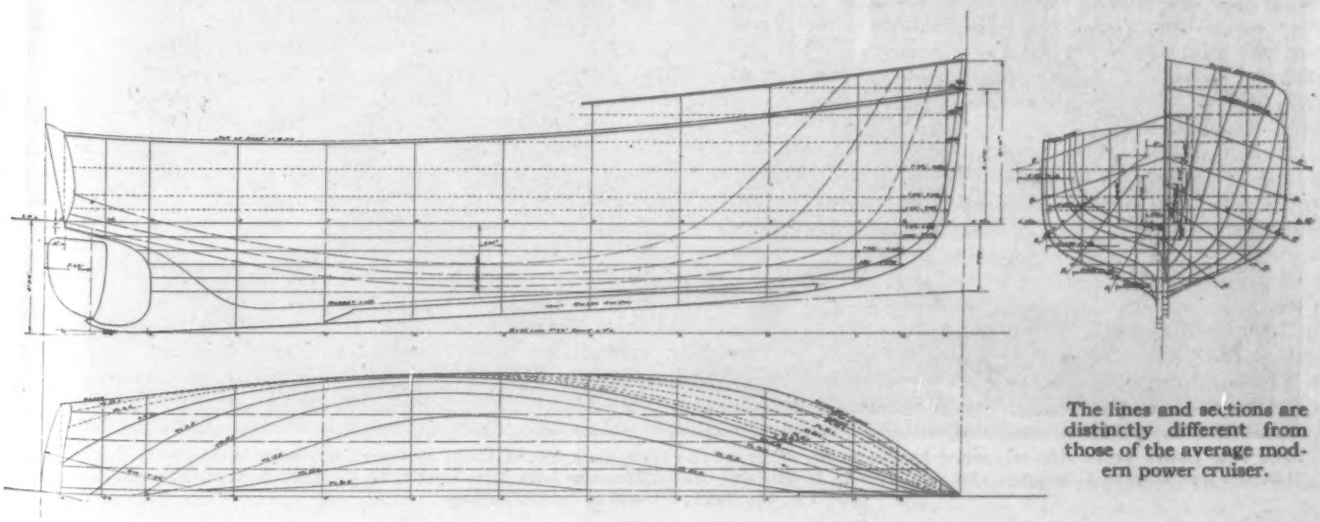
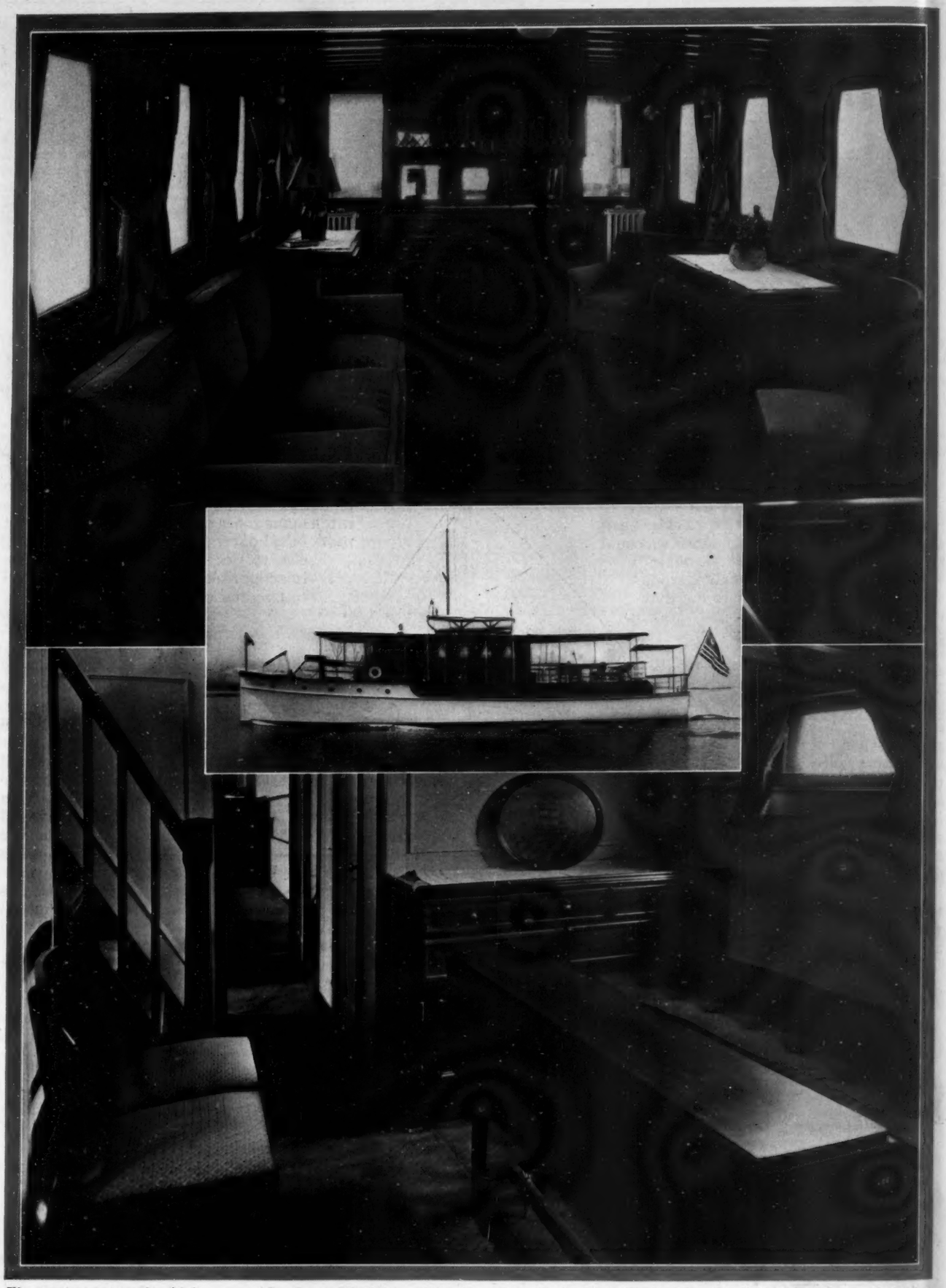


The lines and sections are distinctly different from those of the average modern power cruiser.

The Latest in Power House Yachts — *Alcira*



The new power yacht *Alcira*, owned by James W. Alker, of the New York Yacht Club. Designed and built by the New York Yacht, Launch and Engine Company, she is 65 feet in length and makes 14 miles with two Twentieth Century motors. She will be used as tender to the owner's Class R racer *Yankee*.

Out of the Fog Come the Ten-Meters

An Account of the Voyage from Halifax to the Sound of the first of this New Class

By GORDON RAYMOND

ON Saturday, May 14th, the first shipment of the new ten-meter class designed to the International Rule, comprising eight of the fourteen boats, were lowered into the waters of Halifax harbor, and on that same day fourteen yachtsmen took steamer from New York on their way to sail the fleet down the American coast to Long Island Sound. Of course, there were predictions of disappointment and disaster on the part of some of those who take their sailing in smooth water; it would be impossible to properly rig such a fleet of boats in less than two weeks; the rigging wouldn't fit, parts would be missing, and if we did get away, why, of course there would be head winds and fog and so on until, to listen to these pessimists, one would think it was going to take until July to complete the trip.

Consider, then, the thrill these fourteen yachtsmen enjoyed, when, on driving out to the basin shortly after the steamer docked in Halifax early Monday morning, they were met suddenly with the picture of eight beautiful ten-meter yachts, tied up abreast in twos and threes, and completely rigged. Imagine the joyful excitement as owners and crews scrambled aboard their respective craft, examining gear, gazing aloft at the towering grace of those 72-foot masts, feeling of the beautiful finish of varnish and enamel work, and generally expressing their admiration, much to the edification of most of the Halifax waterfront population which banked the pier six deep.

The first of the ten-meter fleet preparing to leave Halifax in tow of the schooner *Michabo*.

What a record for designers and builders! May 1st was the delivery date promised, and on May 1st eight of the completed fourteen were shipped direct to Halifax on the first available steamer. Too much cannot be said for the personal supervision on the part of the designing firm, Burgess, Rigg & Morgan, Mr. Linton Rigg personally going abroad, and other representatives being present at various stages of construction. Great credit also belongs to Abeking & Rasmussen, the German builders at Lemwerder, who not only turned out a quality of workmanship that has delighted every owner and brought praise from hundreds of others, but in addition delivered everything in its final completeness and on the day promised. And more to follow: all the professionals were in Halifax when the boats arrived Friday, May 13th. On Saturday the boats were launched in slings from the steamer's deck, rigged on Sunday, tuned up and trial trips taken on Monday, provisioned and raced on Tuesday, and on Wednesday the entire fleet put to sea, with the exception of one whose owner and crew had made no appearance. What now of the gloomy pessimists?

The Royal Nova Scotia Yacht Squadron members were wonderful in their hospitality and willingness to help all hands, and one had only to express a need to have it immediately supplied. The Squadron put up prizes and arranged for a race Tuesday over the sixteen-mile inner course, and delegated a racing member to each yacht, but unfortunately, due to the rush of getting things ready for departure next day, and some procrastination, only three boats crossed the starting line. You may be sure that Commodore Clifford Mallory, father of the class, and the man who has done so much to strengthen friendships abroad in international racing, was first away on the trial trips the day previous and came close to taking the first event. "Ted" Alker, sailing *Valencia*, and John V. W. Reynders' *Esquila*, sailed by the writer, made up the trio to show who were keen for the first race of the season.

The sixteen-mile course, starting at the Squadron breakwater, comprised a two and one-half-mile beat out, a triangle twice around and a run home. There was little to choose between the three boats. Spreading out a little on the first beat to windward with the wind about south, they maintained their positions twice around the triangle, even in the fog which rolled in during the race, and finished within five minutes, first to last. *Esquila*, getting the jump at the start, maintained her lead and carried off first honors. In the evening a delightful informal smoker was given for all the visiting yachtsmen and the prizes presented along with interesting addresses made by Commodore MacIlreith of the Squadron, Commodore Mallory and others.

All hands were busy the following morning making things shipshape and getting in position for the tow out to sea behind Mr. Carlyle's big fisherman schooner *Michabo*, which circled around picking up boat after boat until all but ourselves on *Esquila* and *Narcissus* were strung out on long tow lines. We still had to swing for compass adjustment and clear the customs, so did not get off until six hours after the fleet disappeared seaward with *Michabo*. Part of this time was lost by towing down to the squadron in an attempt to recover our anchor, which we were forced to leave there the day before, but found finally by telephone that we were foul of a government cable (unmarked); so we buoyed the rode and left the outfit to the squadron. What more can a yachtsman do to express his appreciation of hospitality than to leave his anchor?

Just before we got under way the *Narcissus*, in charge

Charlton Reynders, on *Esquila*, "shooting the sun" on the way down.

of professionals, beat out and disappeared in the fog, which by now was rolling in; and when we came charging along a little later with everything on we failed to see them in the fog, although close in to the land, as we really took our departure from the fog signal. We beat on out to the Lightship and made our offing from there; then we let her have it in hot pursuit of the fleet somewhere out in the fog and the darkness ahead. "Fresh southwest winds and fog," said the weather report; and fresh southwest they were, and fog that crawled in, through, and around every man in that fleet and even penetrated the ice box.

How she did knife through those head seas and how she did go! When it blows a half to a moderate gale, give me your well-designed yacht form for going to windward. Well, we were doing fine; Reynders wanted to catch the fleet, I wanted to catch them, and Burt Hart, in command, isn't the man to take in sail just because it blows a little. So we had been carrying on for quite a while and surely, we thought, nobody could be nearing Marblehead any faster than we, so let's hang on. Then came the first patter of rain, and just as we were about to shorten sail *bang* went the main outhaul, and in came the clew. The heavy clew iron and several slides were off the track and flogging in great shape, but we quickly ran the mainsail jam forward on the boom, reducing it to a narrow triangle and saving the track and silencing the whipping leach, then took it in. We had put a seizing on the end of the mainboom to take the topping lift (having no boom crutch), and this was jammed over the outhaul sheave, so there we stayed the rest of the night, under staysail, until dawn. When things were quiet again Captain Doran, who had been at the stick, said to me, "Now ain't that a shame, Mr. Raymond? I just had this baby goin' nice and talkin' to me."

What now of the fleet? With a head wind they had apparently decided to hold on to their tow, and so had proceeded slowly all afternoon and night diving into a vicious head sea. Pitching wasn't the only motion, and in due time mal-de-mer, that ancient ailment of the sea, made itself felt and heard. Two boats were strung out on the port quarter of *Michabo*, and three on the starboard. Nobody, as I recall it, expressed their love for the towing experience, and when the two leading boats began to develop strong local attraction for each other, and from that to getting positively familiar by playing leapfrog over each other's towline, why, then some of the poor, miserable, neglected guests out behind in the fog and darkness began to feel that it was not a gentleman's party, and took to the great open spaces. The two port boats broke away, or were cut, and a little later *Valencia*,

The crew of *Branta* (left to right): Douglas Green, Bob Moore, Olin Stephens, G. G. Milne (owner) and Arlen (prof.).

with *Cythera* astern, broke away, leaving *Revenge* under tow alone in care of the schooner. *Branta*, under trysail and staysail, stood out to sea for about fifty miles on the starboard tack, while *Twilight* and *Cythera*, under trysail and staysail, beat on down the coast, as did also *Valencia* under three reefed main and staysail. Shortly after *Valencia* broke away, and as they were in the midst of getting some sail on, having cut away *Cythera*, Ernest Smith, one of Ted's crew, said to "Wen" Brooks, "Well,

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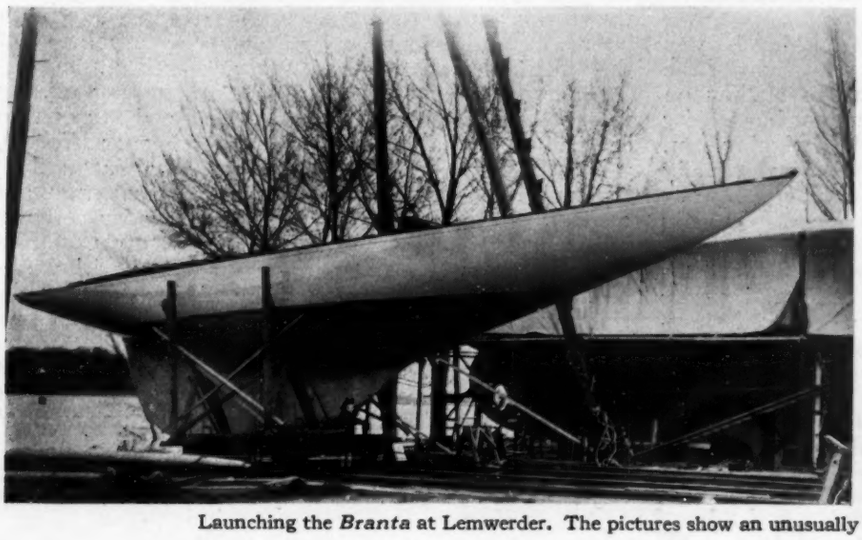
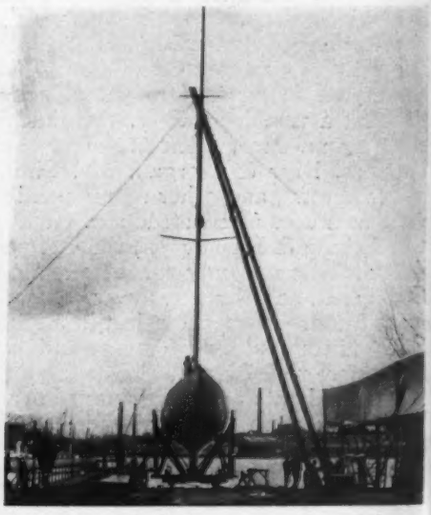




Launching the *Branta* at Lemwerder. The pictures show an unusually wholesome underbody.

The Aerodynamics of Sails

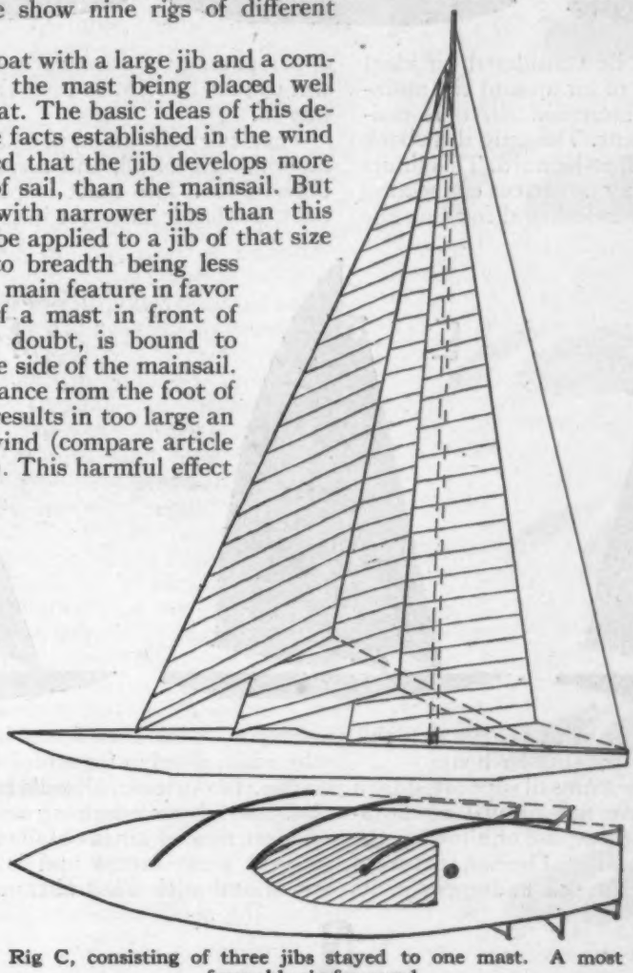
Part IV—New Rigs: Their Advantages and Disadvantages

By Dr. Manfred Curry

THE recent aerodynamic experiments with sails in the wind tunnels of Germany and America have revolutionized the designs of sails to such an extent that the old gaff rig is becoming quite an exceptional sight. Let us examine several designs of rigs, some of which have been tested and others which are entirely new to the field. The development of these new ideas is being undertaken by a prominent firm of American naval architects and engineers, with whom I am now associated. The pictures on the next page show nine rigs of different design.

Fig. A — Represents a boat with a large jib and a comparatively small mainsail, the mast being placed well toward the stern of the boat. The basic ideas of this design were evolved from the facts established in the wind tunnel tests, which revealed that the jib develops more drive, relative to its area of sail, than the mainsail. But as these tests were made with narrower jibs than this design shows, they cannot be applied to a jib of that size — the relation of length to breadth being less favorable. Besides this, the main feature in favor of all jibs is the absence of a mast in front of them. This jib, without a doubt, is bound to spill all its wind onto the lee side of the mainsail. This is due to the long distance from the foot of the jib to the mast, which results in too large an angle of opposition to the wind (compare article in YACHTING, June number). This harmful effect is especially pronounced in a *heavy wind*. Besides, the long luff of this big jib sags through towards the sides, not being able to stand the great force. For these reasons this rig cannot be expected to be successful.

Fig. B — A fairly good medium weather type of rig, although the drive of the sails could be increased by overlapping one another. In a heavy wind, when the boat is obliged to drop its first jib, the rig is unfavorable, giving the boat a tremendous weather helm. This is the case with all boats where the sails are placed at such a long distance from the center of the lateral plane. The mainsail naturally has to be cut down considerably in size so as not to exceed the allotted area.



Rig C, consisting of three jibs stayed to one mast. A most favorable rig for speed.

Fig. C — Represents an entirely new form of rig consisting of jibs only. As this is a most novel and a very favorable rig, we will give it more thorough attention, observing it separately later on.

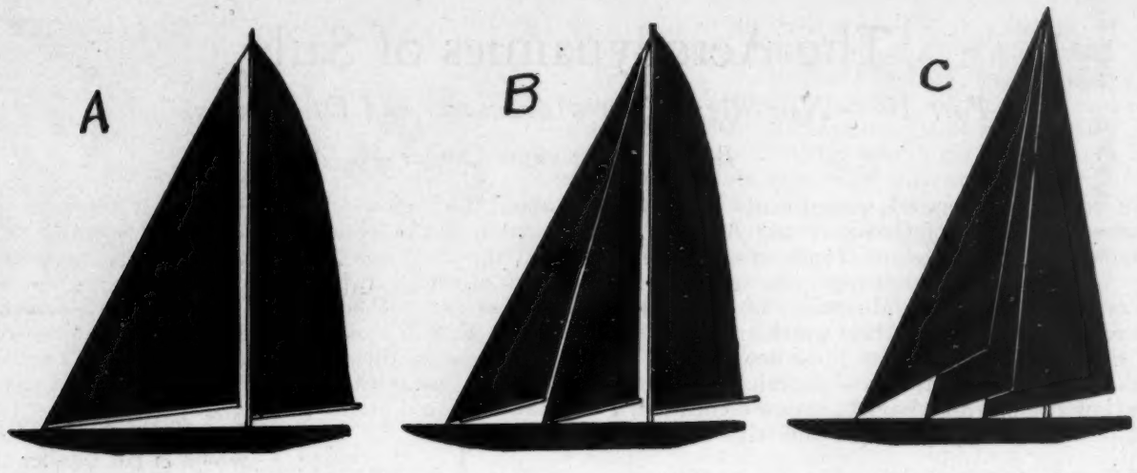
Fig. D — Shows a modern rig of some of the fastest German racing boats, although the sketch is exaggerated to show the point more clearly. This design was inspired by the restrictions whereby the fore triangle is measured, and not the absolute area of sail. This allows us to transfer most of the area into the mainsail without overstepping the designated area of sail. The reader may ask — "How about the back wind of the jib, does it not destroy all the suction in the lee of the mainsail?" Normally it would, but the jib sheets are not, as ordinarily, fastened to the deck of the boat, but run over "outriggers" — an invention of the author, consisting of adjustable metal arms which extend over the sides of the boat, the jib sheets trimming at their outboard ends. In our case they are placed close to the stern of the boat. In this way the jib can be placed in any position desired, the most favorable forming an angle to the wind which is 10° smaller than the angle of opposition of the mainsail. Thus the back wind of the jib passes through the space between the two sails without, or with only very little disturbance to the mainsail, in most cases even increasing the drive of the mainsail. In very strong winds this large jib naturally has to be replaced by a smaller one. Before the wind the large mainsail is favorable, at the same time allowing a big spinnaker. Although the spinnaker boom is very short (distance of mast to tack of jib), a big spinnaker will balloon out towards the sides and can be carried to advantage.

Fig. E — Perhaps the most favorable rig: Three long, narrow sails overlapping each other, forming a strong valve effect by their narrow slits, created by the spaces between first and second jib, and second jib and mainsail. The speed of the air is increased while passing through the narrow passages, and through this increase of velocity the suction effect of all sails is strengthened. The jibs are not, as is usually the case, fast to the mast, but are hoisted to a strut. Thus the slot between them, even at their highest point, is still large enough to allow a correct flow of air and an increased suction. The sails being near the center of pressure of the lateral plane of the boat enables us to lower the first jib without materially disturbing the balance of the boat. "Outriggers" are of great advantage. The relatively small jib triangle allows the use of a large mainsail. This boat is best going to windward.

Fig. F — A similar design more suitable for light winds on account of larger jibs, and especially good with wind abeam.

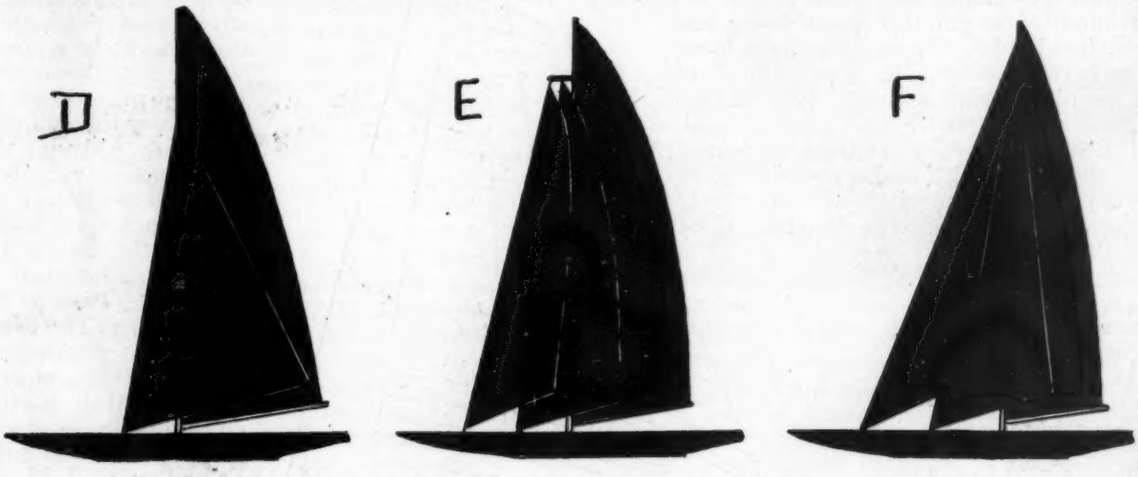
Fig. G — A typical heavy weather type. Broad and low sails with the center of pressure (effort) as low as possible.

Fig. H — Instead of one mast, two masts which are joined at the top are introduced. The sail runs between the two masts with a free luff. This rig was originated as a result of the various wind tunnel experiments, and presents one solution as to how to do away with the mast



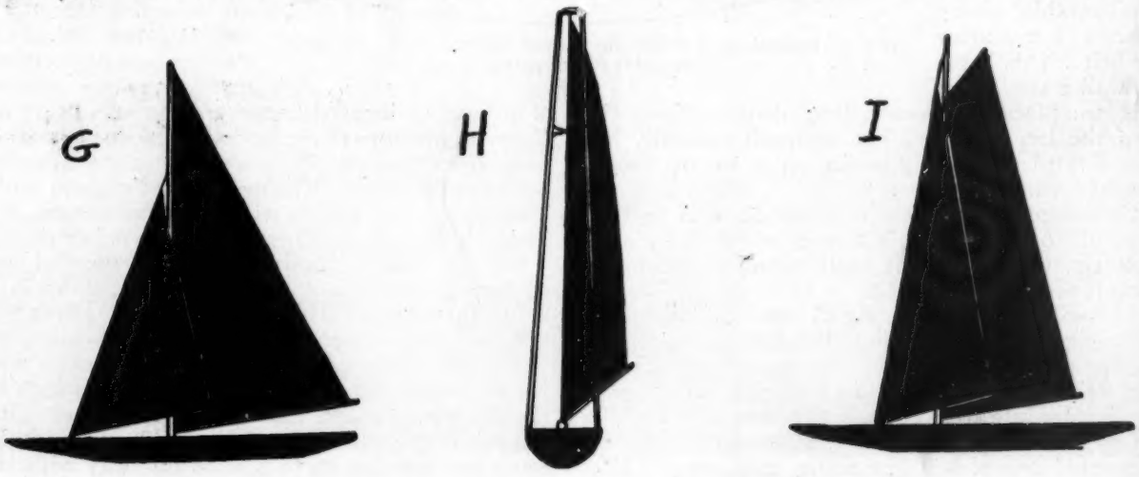
forward of the mainsail. It can be considered an ideal answer to this problem. The flow of air around the mainsail is uninterrupted, and the increased drive is estimated as 10 per cent to 20 per cent. The only drawback of this rig is the sagging of the luff to leeward. This limits the rig to small boats. One or many crosstrees connecting the two masts, supporting the mainsail, and forming the upper part. In a strong wind the gaff swings off badly, and cannot be kept in even though the boom is trimmed way in.

The design shown on page 59 is rig C, perhaps the most favorable rig of all, and therefore worthy of more careful observation. The mast is placed near the stern of the boat, so that it does not interfere with the flow of the air



hoisting point for the jib, are advisable. I believe that this rig has a great future, especially for smaller boats.

Fig. I — High narrow sails, the mainsail supported by a very short gaff. These sails have not proved advantageous. The short gaff serves the purpose of allowing the sail to swing out freely before the wind. The bad feature of this rig is the great twist that the sail undergoes in its currents. It has been found by all experimental tests that the mast, when in front of a sail, is of great harm to the latter. In our case, all sails cut the wind with their sharp luffs, and, by overlapping each other, an aerodynamically perfect flow of air is obtained. I believe that this rig has a very great future and is especially favorable on the wind and with wind abeam. A slight difficulty to over-



come is the staying of the mast. It might be difficult to counteract the great force of the three jibs, all pulling the head of the mast forward. Going before the wind seems impossible at first sight. However, a very large spinnaker, corresponding to the triangle of the jibs, will be allowed.

In summarizing, I wish to point out the three striking features in favor of this new (let us call it) "jibsail rig."

1. The valve effect caused by the slots between the sails increasing the suction, and furthermore, the advantageous overlapping.

2. The absence of mast interference, enabling all three sails to work in absolutely undisturbed air.

3. The foot of each sail shows the most favorable arching. Knowing that a correctly arched sail develops about twice as much pressure as a flat sail (this has been tested in the wind tunnel), and knowing that a boom on the foot of a sail flattens the lower regions of the canvas, we realize the advantage of three freely arched sails.

The next drawing shows a top view of the same boat. To obtain the most effective flow of air, and to allow this broad overlap, three pairs of "sheet-outriggers" are attached to the deck and sides of the boat near the stern, holding the jib sheets. By this construction the wind of one sail is not thrown on to the sail behind, but passes off parallel with the sail.

If we compare these new rigs with the cross section of the aeroplane wings shown on this page the similarity of the two strikes us at first sight. There is no doubt that the conditions and purpose of both plane and sail are the same, and what can be said of one is undoubtedly true of the other.

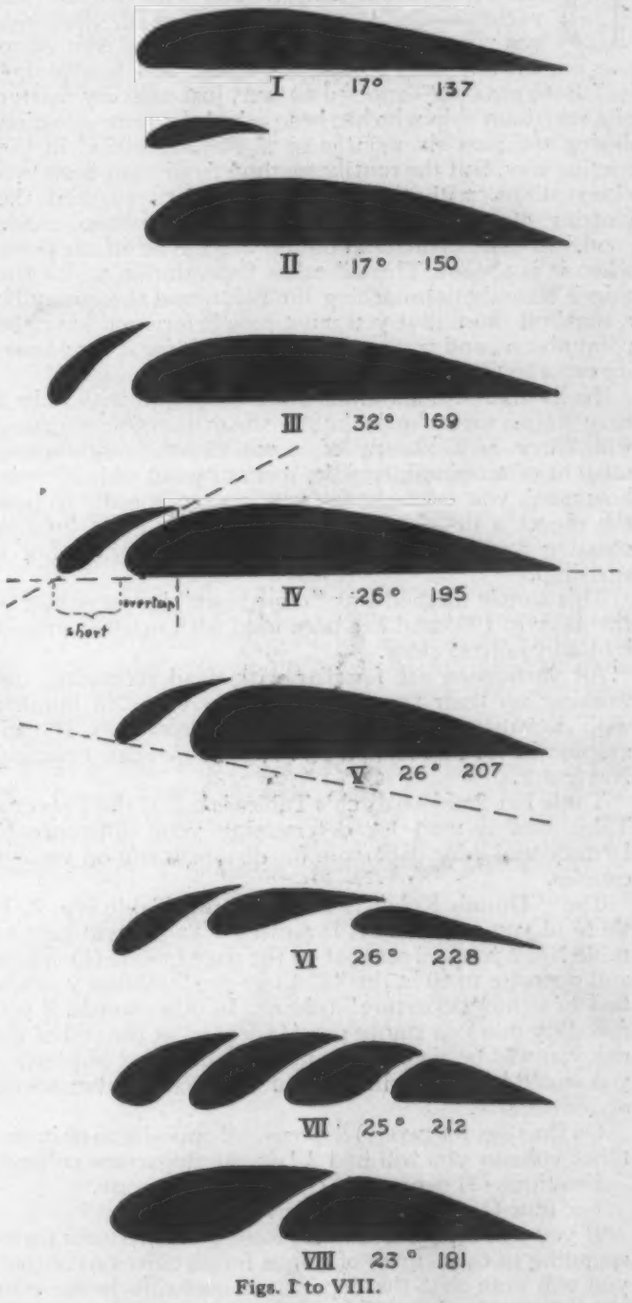
Those planes having a small air-guiding plane fastened to their front edge (called Lachman and Handley-Page planes) have been tested in the wind tunnel of Goetingen (Germany) by Professor Prandtl; and their lift, which corresponds to the side pressure of our sails, has been measured. The thick forms, however, should not disturb us, for the side that counts is the lee side (upper side), the under side being of little consequence in the development of pressure. On the right-hand side of each cross section the maximum lift (drive) obtainable at the given angle of opposition of plane to wind is noted. These figures serve as a proof of the importance of the influence of the small plane in front of the bigger plane with regard to the development of drive; in other words, they show the extent to which the jib influences the stream of air around the mainsail, improving the efficiency of the mainsail more than 50 per cent of its original drive — *if of the right size, right place, and right position*. In observing the planes I to VIII we find that in plane II the small plane (let us call it jib from now on) is situated on the lee side of the large plane (mainsail). In spite of this rather unfavorable position, the drive is somewhat increased (from 137 to 150 units).

This advantage is seen more plainly when the jib is in front of the mainsail (Fig. III, 169 units). A most remarkable improvement is obtained by reducing the width of the slot between the jib and the mainsail, as shown in Fig. IV.

Fig. V is the plane most similar to a sloop rig, with the jib somewhat to leeward of the prolongation of the boom of the mainsail, as is the case with our sails, the boat itself being in the position indicated in the dotted line. Comparing plane I (cat rig) with this plane, we recognize that the drive has been increased from 137 to 207 units.

Still more favorable — as a matter of fact *the* most favorable distribution of area — is the one shown in Fig. VI. The plane is divided into three parts, having two slits for the air to pass through, the velocity thereby being greatly increased on the upper, or lee, side. The reader will have noticed that this is almost an imitation of our jibsail rig (C) described in the foregoing text. The improvement of the drive up to 228 units — almost 100 per cent — speaks for itself, and may serve as a proof of the superiority of this rig over all other rigs. In observing Fig. VII, we see that a division of a plane into more than three parts is of no use. Fig. VIII, showing the plane divided into two parts of about similar size, cannot be considered very advantageous.

In considering the form of these planes and their



Figs. I to VIII.

efficiency, our conclusions as to how a jib should be set fall under the rules set up in my book on the "Aerodynamics of Sails." These conclusions, however, are based, not on theory, but on actual racing experience.

1. To increase the drive of the mainsail the wind of the jib must not fall onto the mainsail, thus filling up and thereby diminishing the suction on the lee side. The jib should stand at an angle of opposition to the wind which is at least 10° smaller than the angle of opposition of the

(*Continued on page 88*)

A Simple Rule for Keeping Clear of Obstructions

A Handy Method of Determining the Change of Course Necessary to Pass a Point at a Definite Distance Off

By CAPTAIN J. F. HELLWEG, U. S. Navy

DURING a recent conversation with a couple of yacht owners, the question was asked, "Suppose you were heading in for a landfall and wanted to pass a point two miles abeam, how would you insure doing it?" Both gave the expected answer, just as every master of a merchant ship who has been asked the same question during the past six months in this office replied in the routine way. But the routine method requires at least two observations, with the elapsed time between, and the plotting of the two bearings and the "distance made good," in order to predict how far you will be off the point when it is abeam. This all takes time, during which the ship is steadily approaching the point, and there may be a shoal off shore that you must pass before you have the point abeam, and you can't afford to wait for several bearings to check up your course.

To be able to determine *immediately*, and with only a very simple mental calculation, the distance your course will carry you abeam of some object — lighthouse, tangent of an island, spindle, rock, or point of land — or how much you must change your course in order to pass the object a definite distance away, is a great help in coasting and may save considerable anxiety, if not a smashup.

This simple method was "doped out" by an ensign in the navy in 1905 and has been used with marked success by many officers since.

All yachtsmen are familiar with dead reckoning and working up their runs. They are therefore all familiar with Bowditch's Tables, otherwise known as Hydrographic Office Publication No. 9, the American Practical Navigator.

Table No. 2 of Bowditch's Tables is called the Traverse Table and is used for determining your difference of latitude and your departure for distances run on various courses.

The "Thumb Rule" is based on this Table No. 2. If those of you who have a Bowditch's Tables will turn to table No. 2 you will see that on the page for one (1) degree and opposite to 60 in the "distance run" column you will find 1 in the "departure" column. In other words, if you run sixty miles on course one (1) degree, at the end of the run you will be exactly one mile to starboard of position you would have been in had you run a course due north, or zero course.

On the page for two (2) degrees and opposite to 60 in distance column you will find 2.1 in the departure column.

For three (3) degrees, it equals 3.1 departure.

For four (4) degrees, it equals 4.2.

If you will record in tabular form the departures corresponding to the degrees of course for distances sixty (60), you will note that the departures gradually increase by small decimals up to 12° (twelve degrees), where it is 12.5.

From 12 degrees up to twenty-two (22) degrees, the departures remain constant at 0.5 above the unit. In other words, for 22 degrees, the departure equals 22.5 miles, for a distance run of 60.

From twenty-two (22) degrees up to thirty (30) degrees the departures gradually reduce by small decimals until at thirty (30) degrees it again reaches the unit. In other words,

23 degrees	60 distance	23.4 departure
30 "	60 "	30.0 "

In this special application of Table No. 2, please remember that the angles from one (1) degree to thirty (30) degrees represent the angles between the ship's head and the bearing of the object: in other words, *the object's angle on the bow.*

From the tabular form you have recorded, you will see that for a *distance run* of 60 miles, you will make one (1) mile departure for each degree change of course away from the bearing of the object, disregarding fractions, for simplicity. In other words, if the object's *angle on the bow* is 10 degrees, you will make 10 miles departure in 60 miles run. If the angle is 25 degrees, you will make 25 miles departure in 60 miles distance run.

Disregarding the fractions for simplicity of Thumb Rule is really a factor of safety as you will actually be further offshore than calculations give you.

RULE. — For distance run of sixty (60) miles, the *angle on bow* equals the number of miles abeam. Or stated differently, the *ship will make one mile departure for each degree of angle on the bow for run of sixty (60).*

But no one can see sixty miles. Visibility conditions continually change at sea. Therefore it is necessary to determine by any method possible the distance of the object at the time the bearing is taken. At night that is very simple in the case of lighthouses or lightships. The visibility of the light is recorded in the published Lists of Lights. Therefore, at the instant the light pops over the horizon, you have an approximate idea of its distance away. During daylight, other means of estimating the distance can be used.

By the application of the well-known relation between similar triangles, we can then determine either the angle we are after, or, if the angle is known, then the departure we will make.

Application of Rule

Whatever fraction your estimated distance is of sixty, your resulting *distance abeam* will be of the *number of degrees* the object is on the bow.

EXAMPLE. — You pick up a light on its visibility circle fifteen (15) miles away. Light is dead ahead. What course must be taken immediately to pass light 4 miles abeam?

ANSWER. — 15/60 equals ¼. Therefore distance abeam /Angle on the bow must equal ¼. $\frac{\text{Distance Abeam}}{\text{Angle on Bow}} = \frac{1}{4}$ The distance abeam desired is 4 miles. Therefore 4 Angle on bow must equal ¼, or the *angle on bow must be* 16 degrees.

SECOND EXAMPLE. — You pick up a light ten (10) degrees on your bow on the light's visibility circle. Visibility conditions are normal. Chart shows visibility of light is twelve (12) miles. What change of course must be made *immediately* in order to pass the light four miles abeam?

ANSWER. — 12/60 equals 1/5.

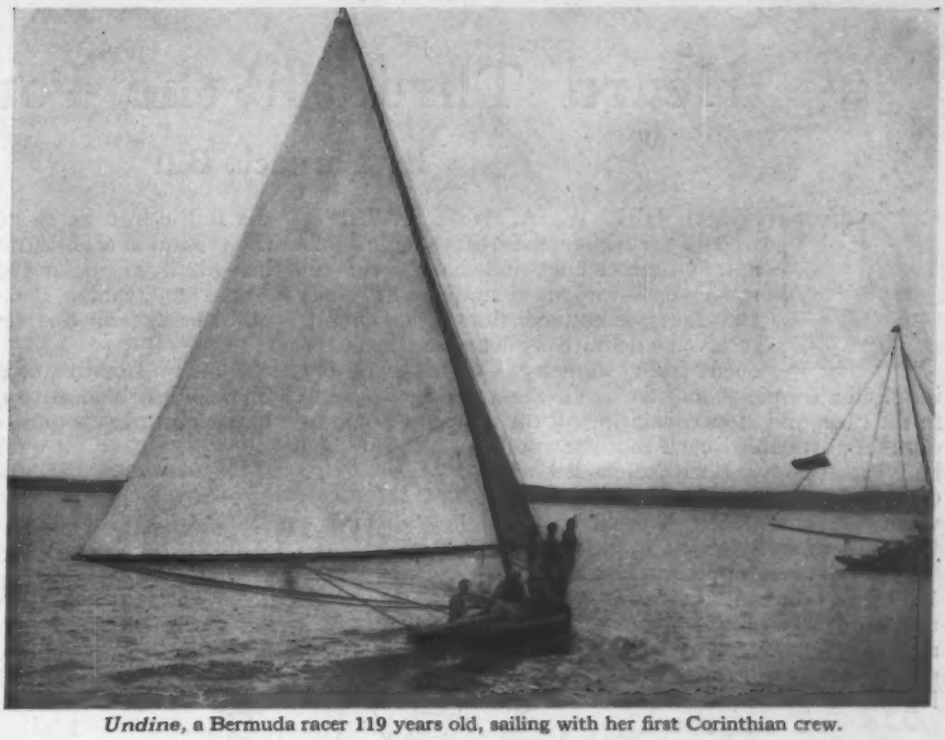
Therefore $\frac{\text{Distance Abeam}}{\text{Angle on Bow}}$ must equal 1/5. But distance desired is 4 miles. Therefore $\frac{4}{\text{Angle on Bow}}$ must equal 1/5. Or Angle on Bow must equal 20 degrees. But

(*Continued on page 88*)

Undine, an Early Bermuda Racer

Over one hundred years old, she has carried the rig "which made the Islands famous" all of that time

By HERBERT L. STONE



***Undine*, a Bermuda racer 119 years old, sailing with her first Corinthian crew.**

LYING on the beach at the head of Pitts Bay, Hamilton, Bermuda, is an old hull, sound for the most part despite the lack of paint and weatherbeaten appearance, which made yachting history in Bermuda waters for the better part of a century. Built of native cedar, she is typically Bermudian in design and construction, and when she last had a mast in her, typical also in rig. For, although now 119 years old, she carried the tall rig which has come into vogue among yachtsmen recently, and called by them variously by the names Marconi, jib-headed, or Bermudian. So that, in spite of all our claims to modernity, we are today almost going back to first principles in the matter of the tall, triangular sail with the long luff, or leading edge.

Whether the rig originated in Bermuda, or whether it merely attained its greatest perfection in the Onion Isles, does not matter. Probably the same general rig was used on the Chesapeake as early, or even earlier, than it was in Bermuda, for there was considerable trade between Bermuda and Virginia ever since the days of the Revolution — or before. But be that as it may, the old *Undine* and her rig are worthy of study by yacht sailors of today.

The *Undine* was built back in 1808, which, any way you look at it, is quite a long time ago. The following details about the old packet were furnished by Henry C. Marsters, of Bermuda, whose experience with the *Undine* dates from 1882.

She was built by a man named Gibbons. Dr. W. H. Wilkinson and Dr. Thaddeus Outerbridge worked on the *Undine* at Bailey's Bay, where she was built, when they were boys. Her hull dimensions were: Length over all, 23′10″; water line, 21′7½″; beam, 8′2½″; depth, 4′6″; draft, 4′6″ with her regular keel. For racing an additional keel was added, increasing her draft by one foot. She had 4½ tons of iron ballast inside. At a later date this was changed to lead.

On this short length she carried a spruce racing mast 43′6″ long. This was a heavy stick, 8½″ diameter at the deck, for she had no shrouds or side stays to hold it, and only a headstay leading down to the end of a long nose pole, 17′3″ in length. The racing boom, or sprit, was 34 feet in length. This long mast raked well aft. According

(*Continued on page 94*)

***Undine*, beached at Pitts Bay after 119 years of service.**

The rig of *Undine* shows that the modern jib-headed rig is not so new.

Heard Through the Porthole

By Barnacle Bill

COMMODORE W. A. W. STEWART, who is very busy these days sailing his new ten-meter boat and making the arrangements for the Scandinavian Gold Cup races, announces that he has finally received a definite challenge for the latter event from Germany. Germany politely inquired a couple of months ago if she would be welcome in the race, and after consulting all the entrants Commodore Stewart cabled back that she would be. Whereupon vast silence ensued, and everybody had nearly given up hope when the announcement arrived that the challenge was on the way. It will be Germany's first appearance here since 1909, when she came in her own pet class, the Sonder boats. Commodore Stewart says that now Germany is in the race he doesn't see how France can keep out of it and he hopes to get a French challenge.

* * *

It may have been chilly when they brought down the first batch of ten-meter sloops from Halifax last month. Anyhow, Gordon Raymond says they bought a hundred pounds of ice for *Esquila's* refrigerator when they left Halifax. When they got into Marblehead they decided that it was superfluous and that they might as well sell it. They took it out of the ice box and found it had grown to a hundred and fifty pounds.

* * *

The millennium may be right alongside of us. Members of the party who brought "Bob" Bavier's *Dragoon* north last month declare that Marty Kattenhorn is now sold on the auxiliary idea and might put one in *Surprise* next season. What impressed him most was that all you had to do was push a button and the thing started. It seems that when Marty built *Surprise* he put a boy's size Craig motor in her. It made nice ballast, but Marty couldn't seem to get it started, so he called in Jim Craig himself who built the engine. The two of them labored over it all one hot summer afternoon, with much perspiration and profanity, but still it wouldn't percolate. Whereupon Marty hove the contraption overboard and hasn't been shipmates with a bullgine since, if he could help it.

* * *

One is perpetually being impressed with the eternal fitness of things. Al Loomis has gone abroad to cruise in the Baltic in a ketch he has chartered in England, and then to sail in the Fastnet race in a new *Malabar* schooner being built in England for an American yachtsman there. And the steamer that took the indefatigable cruiser abroad was named *American Farmer*.

* * *

"Dick" Boardman, of Boston, better known as the Sheik of Marblehead, appeared on Long Island Sound in a checkerboard vest and the R boat *Rebel* and proceeded to do a job on the whole R Class fleet. Some of the other skippers claim it was the vest that did it.

"The real shipping magnate of the yachting world."

* * *

Which leads up to the subject of yachting caps. Linton Rigg, who ought to know, being in the business, says that the first step in buying one's first boat is to buy a yachting cap and wear it on any and all occasions. He admits that he hasn't a yachting cap himself, but then Lint owns only nine boats, unless he's bought or sold a few since we went to press.

* * *

For downright gross tonnage, however, the real shipping magnate of the yachting world seems to be Harry Maxwell. The only yachts Harry owns at present are the fifty-footer *Barbara*, the forty-footer *Banshee*, the ten-meter *Synthetic* (named, it is understood, in honor of a dear, deceased friend), half of the six-meter *Atrocia*, the other half being owned by Sherman Hoyt, a Fish Class boat at Seawanhaka, and a couple of powerboats, *Tara* and *Ballymena*. He uses *Tara* more, he explains, because it is easier to make yourself understood when hailing her across a harbor late at night.

* * *

D. F. Prather, skipper of last year's Mackinac race winner *Intrepid*, is worried about the danger of his crew mutinying this summer from sheer *ennui*. When they took *Intrepid*, an old P-boat, up to the Lakes and put a tremendous Marconi rig on her she started to do an imitation of a lobster pot. They have got her tight this season, Prather reports, but his crew has become so accustomed to straining Lake Michigan through her pumps these past two seasons that he is afraid that with nothing to do but "set round and fester" this year the foremast hands will go sour on him. We suggest that he have them holystone the decks and polish the brass continuously when not otherwise engaged.

The Sea Road

THERE'S a roadway to the mountains
Where the deep blue valleys lie,
And a roadway to the moorlands
Where the lone plains meet the sky;
There's a roadway leading seaward
Where the strong winds madly blow,
That's the road that I'll be taking
With the big red dawn aglow!

There's a salt wind on the highway,
There's a rolling road to trace,
My soul aglow for adventure
And the sea-rain on my face;
Oh! give me the great grey roadway
Where a man can wander free
The rollicking wind-swept highway
That leads me down to the sea!

WINIFRED MAY.

The Sea Anchor

And Something About the Use of Oil at Sea in Heavy Weather

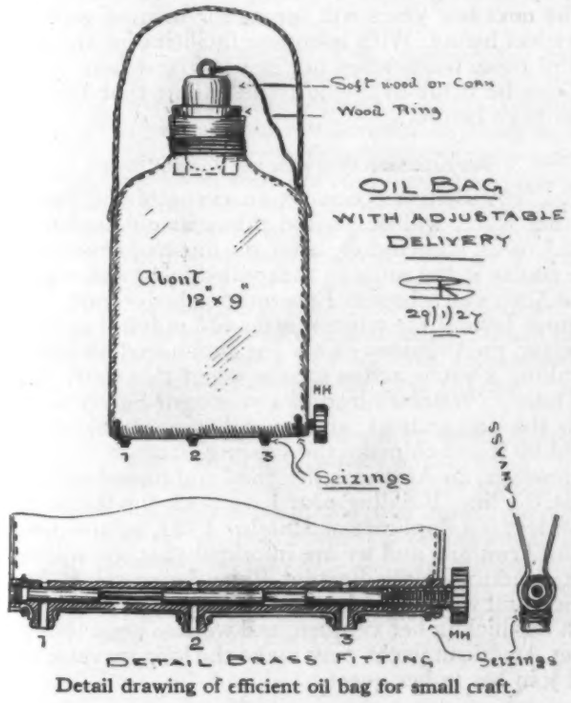
By Robert J. Scott

HOW often has the yachtsman using a sea anchor for the first time been astonished to find his line streaming abeam, or even out on the quarter? The cause of this is not far to seek. The sea anchor is a *dragging anchor*, and a craft will lie to it in a manner akin to that in which she would lie to an ordinary anchor, dragging at the same rate under similar sea and wind conditions.

A few of the old straight stemmers with deep forefoot and masts well aft will drag straight astern. These vessels require no assistance when riding to a sea anchor; but practically every other type of modern yacht needs some form of after canvas to establish a weather-cock effect and bring them bows on to wind and sea. By bringing about such a weather-cock action the dragging of a vessel lying to ordinary anchors can sometimes be checked.

The writer well remembers one wild night, in a southerly gale, with rain and frequent hail squalls, lying to two anchors in a small bay out of which the wind shrieked but into which a heavy sea was tumbling. An anchor watch was set, the duty first falling to a civil engineer, who attempted to keep his watch below decks with the aid of a compass and flask. All might have been well but for the somnolent effect of the contents of the flask. The result was my being awakened by the violent rolling of the yacht and the bumping of the punt alongside. On reaching the deck the vessel was found to be broadside on to the gale and fast drifting out to sea.

The crew, four amateurs, were summoned on deck, arriving in oilskins over pajamas. The oilskins gave the inspiration. The crew were ranged along the outer end of the main boom and made to extend their oilskins fore and aft. (She was a racer with long counter and cruising boom shipped.) A violent hail squall and the reaction of much windy language which was pouring from the mouths of the crew had the effect of bringing the vessel head to wind.

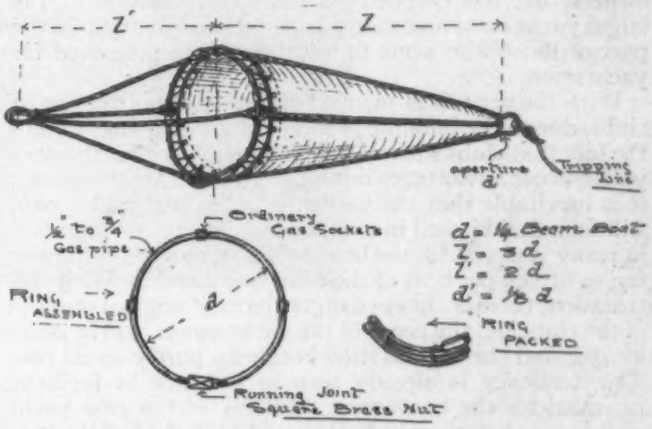


Detail drawing of efficient oil bag for small craft.

The dragging ceased and a couple of large hatches and a tarpaulin lashed in the place occupied by the crew held her in position until daylight, when, after clearing a layer of frozen hailstones from the deck, close reefed sail was made for the run home.

But to return to the sea anchor. Few vessels carry sea anchors of reliable type. The drogue is awkward to stow, whilst most of the folding abominations are merely death traps. The drogue, in conical or pyramidal form, is intrinsically stable, and the one shown in the sketches was carefully designed to:

1. Have ample strength to endure the buffeting of a three days' gale;



Details of an easily stowed sea anchor.

2. Be easily stowed;
3. Be capable of being rapidly and securely assembled.

It consists of a conical bag of heavy flax canvas roped with the best bolt rope. The brass eyelets around the mouth are inserted in grommets formed of galvanized iron rings sewn into the doubled tabling of the canvas. Two pairs of riding bridles are each formed of a continuous rope sewn for its whole length to the bag and spliced into the roping at mouth and end. At the mouth each riding bridle has an eye or cut splice formed on it. Through these eyes the spreader ring is passed and then laced to the bag with a stout hemp or cotton lacing. The spreader ring is in four parts. These are of ordinary gas pipe united by screwing into sockets. The last joint, which must be made after the ring is in place, is a running joint with long brass square nut and locknut. The endless riding bridles are seized together to form an eye. To this the riding warp is secured with a double sheet bend, the end being securely stopped down to its own part. To the vessel end of the warp the chain cable must be shackled and two or three fathoms paid out of the hawsepipe, for the bare warp would rapidly chafe through by contact with the head gear.

A tripping line bent to the small end of the drogue will enable it to be brought on deck without excessive effort. A running line passing through a thimble seized to the warp will enable an oil bag to be hauled out some distance in advance of the vessel. The proportions shown in the sketch should be adhered to.

(*Continued on page 92*)

Yachting

HERBERT L. STONE
Editor

SAMUEL WETHERILL
Associate Editor

EARLE D. GRIMM
Publisher

Editorial

Who Shall Run the Yacht Clubs?

IS a yacht club primarily for yachtsmen, or is it merely a social organization where yacht owners are tolerated and their interests subordinated to the membership at large?

This is a question of supreme importance to yacht owners that has cropped up recently in several of the larger yacht clubs and that calls for serious thought on the part of those who want to see these clubs preserved for yachtsmen.

With the growth in membership of many of the yacht clubs, due to the building of more elaborate houses and to the fact that clubs with water front facilities offer the non-yacht owner advantages not found in other organizations, it is inevitable that the yacht owner, or real yachtsman, will soon find himself in a hopeless minority. Even today, in many yacht clubs, the boat owner represents only from ten to fifteen per cent of the total membership. With this situation, there is always danger that the original purpose of the club, and the needs of the yacht owner, will be overlooked, and the organization become a purely social one. This tendency is already seen in the lack of facilities provided for the boat owner in many of the new yacht club houses being erected. It should be curbed, if the best interests of the sport are to be served.

The answer seems to lie in keeping the control of the clubs in the hands of the yachtsmen, by restricting the voting powers to the owners of yachts. The leading yachting organization of the country, the New York Yacht Club, has long restricted voting to yacht owners; and at a recent meeting of the Larchmont Yacht Club the constitution was changed to provide that, of those elected to membership hereafter, only yacht owners have the right to vote. For the protection of those for whom the club was originally formed, this policy seems equitable, and need work no hardship on the non-voting membership. Certainly the lack of voting privilege in those yacht clubs so restricted has not, so far, been resented by the membership, or served to keep non-boat owners from joining.

In the last analysis, those for whom the club was organized should have the final say in the matter of policy, expenditure, and the like.

The Ten-Meter Class

There seems little doubt that the advent of the new ten-meter class is going to make yachting history in this country. For the first time in many years we have an opportunity of seeing yachts larger than the "Sixes" built under a different rule than the one we've used for the last twenty-odd years.

The first impression made by the new class is distinctly favorable. The boats are handsome, wholesome, able, and, if we can judge from the early races, have speed. Only the result of a season's racing will give a definite comparison with our boats as to the latter element, but we already know enough to be assured that the new craft are good boats, and suited to American conditions.

Already there is talk of an eight-meter class for next year. If this materializes, we will have made quite a start under the International Rule, with the *Katoura* (21½ meters), the Tens, Eights and Sixes to show us what that rule offers.

Municipal Facilities for Boating

A movement has been launched recently in New York looking towards the providing by the municipality of adequate facilities for the mooring and safety of pleasure boats. This is something that has long been needed, and the suggestion should have the backing of all yacht sailors. With many miles of water front, and more and more residents of the city turning to the water for pleasure, it is only reasonable to ask the city to provide protected mooring basins and landing floats for the benefit of the owners of small boats. It has already provided golf courses, tennis courts, recreation fields, etc., for its citizens, and it is time that the growing needs of the canoeist and small boat owner should be cared for.

At Chicago, Cleveland, Detroit, and elsewhere, the municipality has seen fit to furnish safe anchorages for the small boat. New York should do the same, and with the proposed development of Riverside Drive, it is in a position to furnish a couple of yacht basins for the storing of motor boats that would make the Hudson available to those who want to get away from congested roads and public pleasure grounds. And this at small additional cost.

The next few years will see motor boating grow as it never has before. With adequate facilities for the proper care of these boats when not in use, the waters near the city can be made available to an extent that they have never been before.

An American Entry for the Fastnet Race

The only British ocean racing event of the year, the Fastnet Race, will be started this year on August 13th, from Cowes, immediately after the finish of Cowes Week. The course is the same as that sailed last year, when the little American schooner *Primrose* finished second, only 13 minutes behind the winner, after 615 miles of sailing.

So far, no American owner has announced his intention of taking a yacht across for the event this year. Will no one follow *Primrose's* lead of a year ago? Surely someone with the proper boat, and enough time at his disposal, could be found to make the venture.

However, an American designed and owned entry may be at the line. Building near Liverpool, for Ralph St. L. Peverley, is a duplicate of *Malabar VIII*, by the designer of the *Primrose*, and we are informed that she will represent America in the Fastnet Race, being sailed by her owner, and with several American yachtsmen aboard. We wish her luck in her venture, and we also hope that some other American yacht may make the long traverse across and join her in her quest.

In the World of Yachting

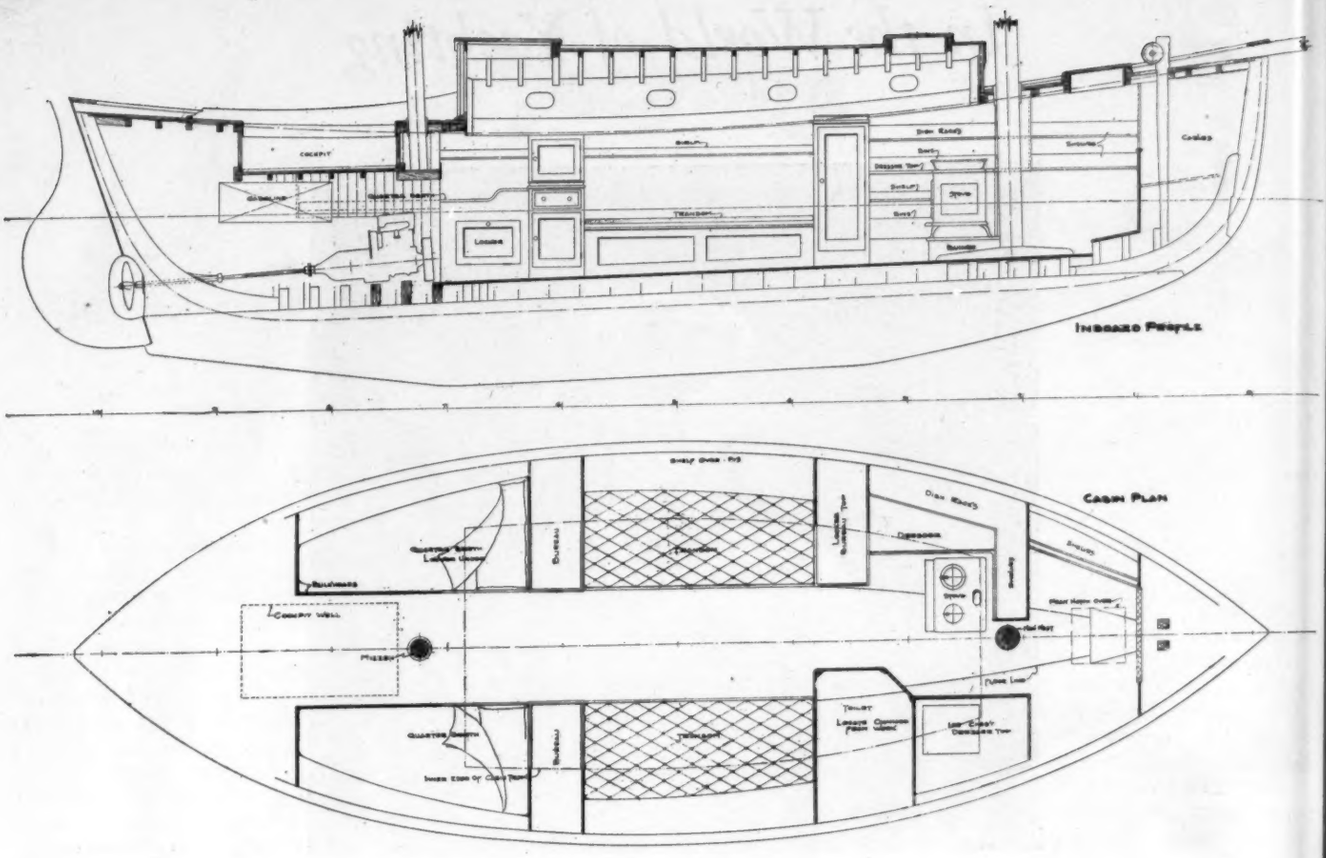
GEORGE W. ELDER

THE President of the International Star Class Association hardly needs an introduction to the yachtsmen of America. And George W. Elder, who has held that office since 1924, is so well known by the work he has done in building up this largest of one-design classes the sport of yachting has ever had, that anything we can say of his "career" seems almost superfluous. But while many of the four hundred or more members of the Star Class know of him through this work, there are many who have never met him, or who do not know him personally.

Like many of our prominent racing men, George Elder started his sailing in small boats, and before he became interested in the Star Class he was sailing "sand-baggers" and other centerboard boats when he was yet a youngster. One of his earlier boats was the sloop "Now and Then," which he raced hard and consistently.

When George Corry, known as "father" of the Star Class, began to get attention focussed on these fast and able little racers, George Elder was soon interested and became the owner of his first Star, the "Comet," No. 14. A member of the Class ever since then, he has owned and raced the following boats in it: "Zete," "Saturn," "Dawning" and "Iscyra," his present Star.

He has always worked hard in the interest of this sterling class of small boats, and when the first local organization of Stars was formed in New York he was made vice-president. Over ten years ago he devised the present system of Star Class Fleets, each with its local officers and organization, and worked out the plan for the international championship series, and for an international organization which was finally adopted in 1922, George Elder becoming the secretary. Largely through his vision and hard work, the class has grown as no other class has ever done, until today Star boats are sailed in nearly every yachting center of the world. In 1924 he was elected president, an office which he still holds. He is a member, also, of the Port Washington Yacht Club.

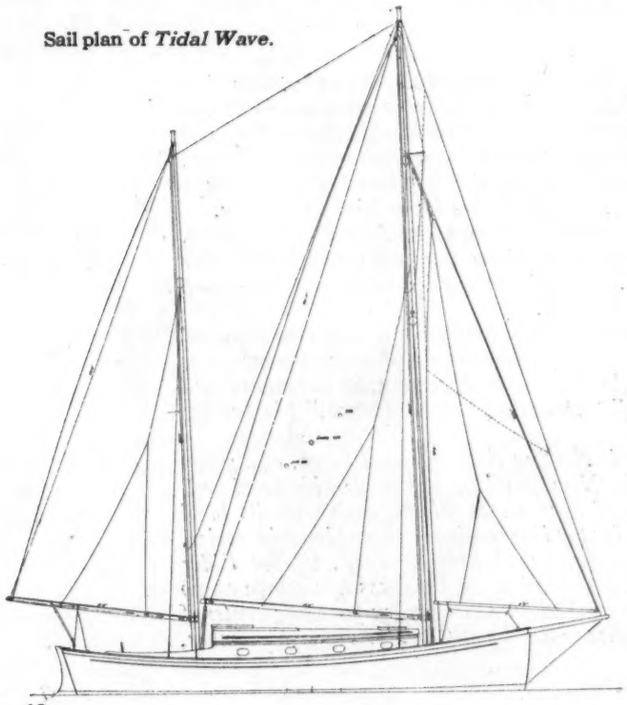


Tidal Wave

A New American Double-Ender Deduced from the Lines of the "West Island"

By PHILIP L. RHODES

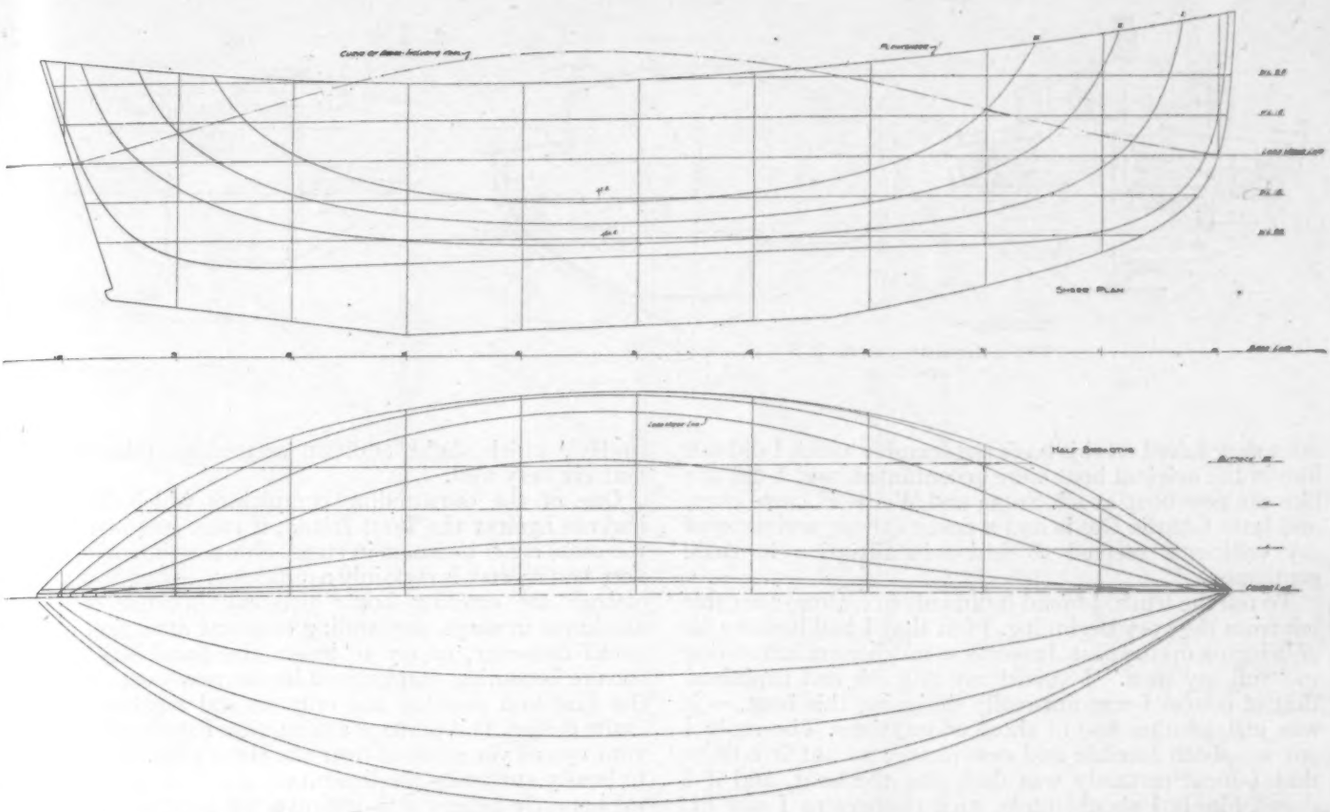
FOR years Sam Wetherill has been attaining the heights as a disburser of praise, and setting new standards of pure affection, in his writings and remarks about the well known and justly famous *West Island*. But apparently all that has been said and written has not been enough, for Mr. Dyer, the present owner of this little double-ender, could not resist the urge to tell all over again the glories of her past and the possibilities of her future.



Sail plan of *Tidal Wave*.

It is fortunate that Mr. Dyer's article should come along just at the time it became possible to publish the lines of this boat. His story in the May issue of YACHTING is much more understandable and believable (beg pardon) when it is possible to glance from the text to the actual lines.

But what I started out to say is, that all the time Wetherill has been accenting the merits of the *West Island* he has been meditating and dreaming of a new *West Island*. He has, however, been temperate. Sandwiched in with the many good points have been listed her faults, such as they are and few as they are. First, he has always been an advocate of the keel boat, though by no means has he been bigoted in the matter. He realized that the *West Island*, being a centerboarder, must necessarily be fairly broad. He felt this beam should be reduced somewhat for smarter windward work, and especially with the adoption of a keel. He felt, too, in spite of the rather astonishing fact that the *West Island*, with her scanty topsides and tiny toe rail, is by all odds the dryest boat that he has ever cruised on — and he has cruised on plenty — that the freeboard might well be increased somewhat, though not to any abnormal extent. The matter of increased headroom was perhaps more the parent of this desire for more freeboard than anything



The lines show an unusually able and weatherly craft, and one that should be a "self steerer" under nearly all conditions.

else. The length, he thought, might be just a little more, in order to make sure that a real honest-to-goodness four-bunk arrangement might be accommodated. The rig — well, it should not be necessary for one to waste much space repeating what Sam likes in the matter of rigs; he is first, last and always a jib-headed ketcher. The rig of the *Eaglet* was a personification of his opinions, and the "flapper clothes" of the present *West Island* are much the same thing.

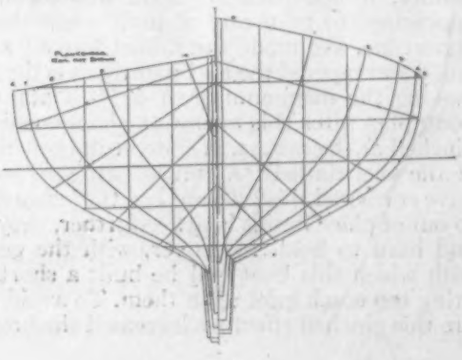
When the actual lines of the *West Island* were once available we spread them out before us and indulged in a little symposium on her form.

"Those sections remind me somewhat of Munroe's," I remarked.

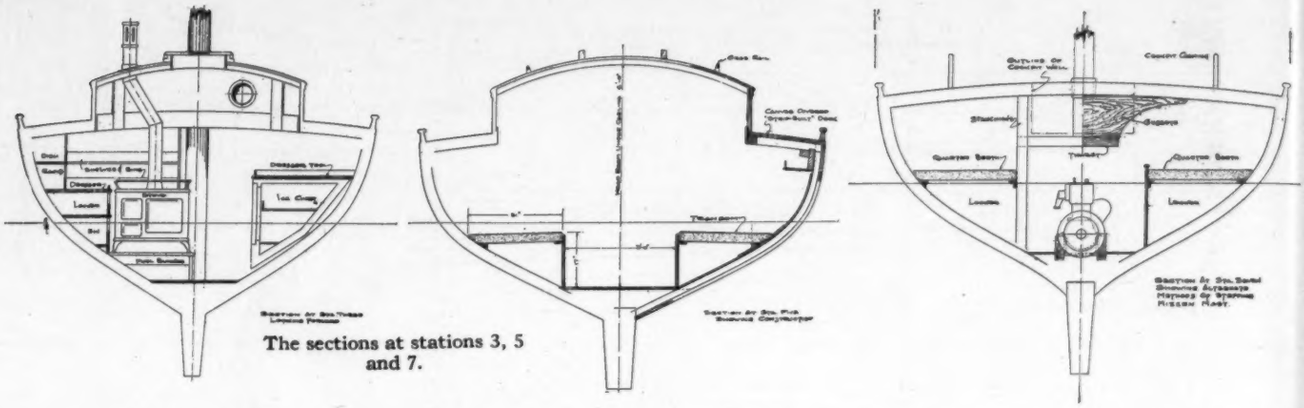
"That's exactly what Herb Stone said," was Wetherill's reply, "but outside of that they seem to be unlike most sections we know today."

One thing particularly noticeable was the fact that while *West Island* seemed to have a so-called raking midship section, instead of the rather popular slope aft, her sections seemed to slope forward. In other words, the maximum breadths of the lower water lines occur at points abaft the points of maximum breadth of those above. This no doubt was not a matter of design or intention, but is probably due to the fact that in the whittling out of the model Mr. Briggs was perhaps more concerned with a fairly constant deadrise from the rabbet, and the latter is not parallel to the water lines as drawn. This would naturally show greater beam on the after sections, especially below water. Another thing that struck the eye in looking at the boat is in the water lines, per se, she seemed to conform to the popular phrase: "She's all ends." But if you will observe the buttocks and the diagonals, which are more important, it will be noticed that she is decidedly not all ends, and that she seems to have a particularly long "parallel body." The diagonals looked as though they might stand considerable improvement, — the lower diagonals in particular, and especially near the ends. They are not particularly fair, and seem to whip in rather abruptly at the ends. However, it should be borne in mind that in a boat of this type having practically plumb stem and stern it is almost impossible to get a diagonal, other than one fairly horizontal, which does not show this feature, unless the water lines are fined up entirely too much. This feature of the diagonals should therefore be discounted just a little when considering double-enders having such short ends.

With his ideas and requirements of the new double-ender, which the future generations will know as the *Tidal Wave*, laboriously typewritten on a piece of yellow paper, Sam came over and insisted that we get under way immediately. The first thing I did was to reduce her beam from 11′ 6″ down to 11′ 0″ by multiplying all of her half breadths by 0.957. The second thing was to raise the sheer some 3 inches. The next was to increase the spacing of the water lines slightly so as to give just a little more moulded depth. The reduced beam and added depth increased the deadrise and eased the sections considerably. Finally the station spacing was slightly increased to bring her load water line length up to 31′ from 30′ ¾″. Once the



The body plan of *Tidal Wave*.



The sections at stations 3, 5 and 7.

lines were faired on this basis the features which I did not like in the original boat were accentuated, and I did not like the new boat at all. Stone and Wetherill came over, and later Charlie Davis and a dozen others, and most of my criticisms seemed to find substantiation in these gentlemen.

To tell the truth, I found it difficult to enthuse over this job from the very beginning. I felt that I had had my fill of bringing up the past. It seems so much more interesting to "roll my own." I voiced my anguish and explained that of course I was not really designing this boat, — it was just another one of those adaptations. The reply I got was both forcible and convincing; to put it mildly, that I most certainly was designing the boat, and if I didn't like it I should make such changes as I saw fit.

This was certainly a most pleasing commission, and from that moment I have grown continually more enthusiastic about the *Tidal Wave*. The diagonals "A" and "B" were pulled in somewhat abaft amidships and swelled a little bit forward, with the concurring changes in the water lines and buttocks. This, by the way, did more to equalize the two ends of the boat, which is one of Wetherill's pet notions as contributory to self-steering. This change, then, pleased him also. The sheer was changed so that she was relatively not quite so high at the bow and several inches higher at the stern. The deck line was swelled out both forward and aft, which besides giving a few more inches of deck space, eased both the sections and the buttocks. We attempted to take the curse out of the ends of the lower diagonals by fining up Station No. 9 and Station No. 1. It is Wetherill's conviction that the *West Island* had slightly more hollow in the load water line forward than the published lines indicate. His contentions seem to be borne out by photographs of the boat. We accordingly placed slightly more hollow at the bow. We gave her just a trifle more overhang forward, taking especial precaution that the overall length should not reach 33′, thereby holding down the building cost.

All of this was done before any consideration was given to the keel. Until this time our efforts had been placed mainly, if not entirely, upon hull form, allowing the appendage to take care of itself when the time became opportune. We made the rabbet line 8″ wide at Station No. 5 and tapered the keel slightly as is the usual practice, making the maximum draft 4′ 9″. Upon examining the body plan after this operation she seemed to be terribly pinched at the rabbet, in spite of the generous proportion of the keel timbers. A turned garboard would of course have corrected this illusion; but turned garboards seemed so out of place in this boat, — further, they are expensive and hard to hold. Moreover, with the generous frames with which this boat will be built a short S-turn would bring too much grief upon them. To avoid in some measure this pinched effect we increased the breadth of rabbet to 10″, which slight addition seemed to take care of matters very well.

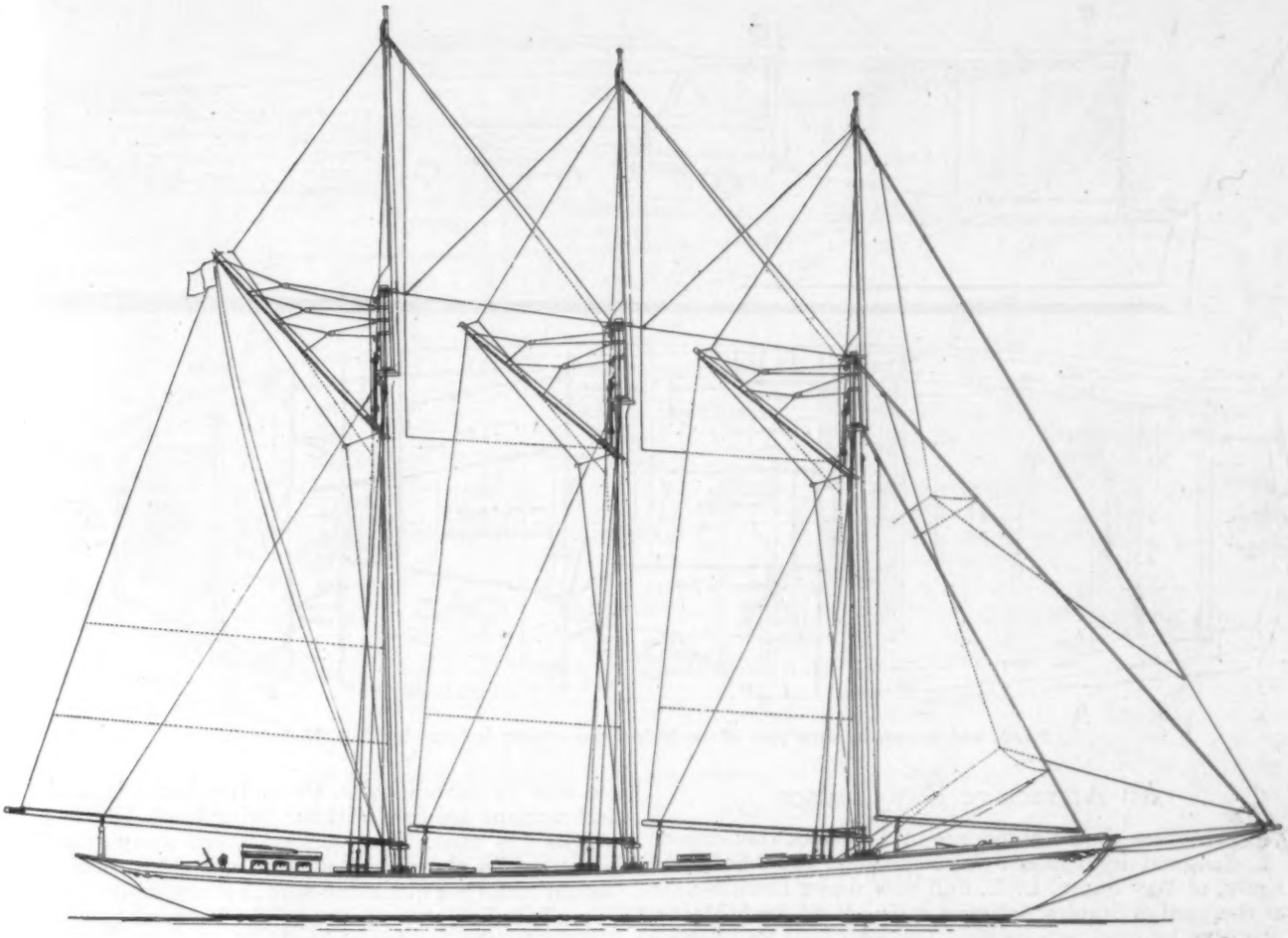
One of the outstanding complaints which Wetherill harbors against the *West Island*, if such language is not too rash, is her slowness in stays. Slowness in stays, when very bad indeed, is certainly a difficulty, — but how much oftener are cruising boats tiresome because of their quickness in stays, demanding constant attention at the stick! However, to try to lessen the possibility of this feature becoming exaggerated in the new boat, we took the first and possibly the only radical measure in the entire design. It is perhaps a thing that has already struck your eye as you glanced over the sheer plan. We decided to boldly cut away the deadwood aft, with a result that we honestly believe will improve the boat in handiness. This feature, as I say, is on the surface a radical one. However, when one considers the usual type of fin keel boat, or a centerboarder, or just a plain, average, substantial cruiser with a heavy rake to the rudder post, it should not take much warping of logic to see considerable similarity in the general distribution of lateral plane. We have borrowed, so to speak, half a page from Frederick Fenger's article on his dhow, which appeared in the February issue.

In the profession we have long since found that by cutting away this lower after corner of the deadwood in anything up to a battleship or a Transatlantic liner, where the distribution of lateral plane is at its maximum, an immense improvement in the maneuvering qualities is effected. If you are inclined to find fault, you might suggest, of course, that they are power boats, and not sailing craft; but contrary to what you might say I do not believe that this fact makes all the difference in the world. When the rudder deflects the flow of water, and this reacts to push the stern of the boat over, the boat does not pivot around its so-called center of lateral plane, but about the virtual center, which is located well forward. Resistance to turning, then, is more a matter of deep lateral plane aft rather than forward. Consequently we have not seen fit to alter the deep forefoot in the slightest, not only as an excuse to preserve this feature of the original boat, but to obtain the rather amazing headroom in the fo'c's'le, which will be discussed later.

Now that you have been told what happened to the lines of the *West Island*, that original and truly American double-ender, perhaps you will suffer to hear my patter on what I think of them. It isn't good practice to enthuse over one's own work, at least in public. I shouldn't be writing this, anyway. Sam should do it, but my insistence that he do so meets with a complete, masterful indifference that is truly sublime. So here goes.

The principal reaction I get is one of smoothness. For a boat falling within the limited category of wholesome

(*Continued on page 100*)



An Auxiliary Schooner for Extended Cruising

THE plans on this page are of a three-masted auxiliary schooner which the designer, John G. Alden, considers ideal for this size of boat. She is of the straight Gloucester fisherman model, with hard bilges, heavy wooden construction, and all ballast inside. Her dimensions are: l.o.a. 121′; l.w.l. 94′; beam, 24′; draft, 12′9″.

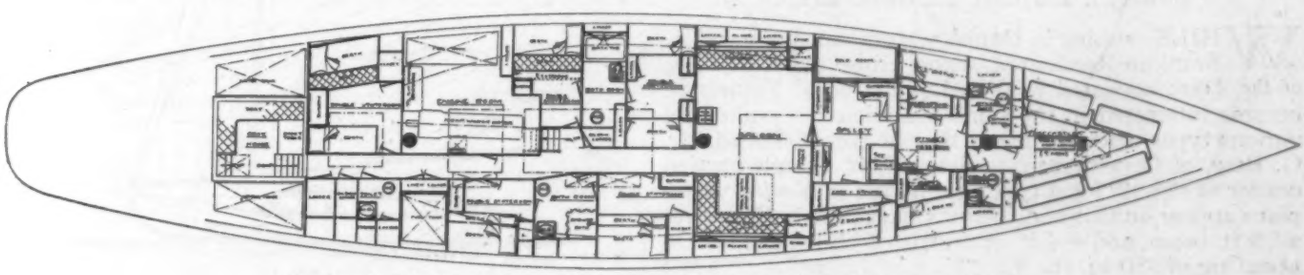
In commenting on the design, Mr. Alden says: "The advantages of the three-masted rig for deep sea work are many. The area of the spanker is only about 60% of the mainsail of a two-master of the same hull design, and the weight of the boom and gaff are correspondingly lighter. There are, of course, many other advantages, and I would plan to have a small stationary gasoline engine on deck to hoist the sails and anchors, as all coasters do.

"A three-masted coasting schooner of this length is handled by a total crew of five men for coastwise work, and seven men when offshore, including the cook. There is no reason why this boat should require more if the finish and fittings are both kept simple and plain. Of course, the cost of construction is reduced to a minimum.

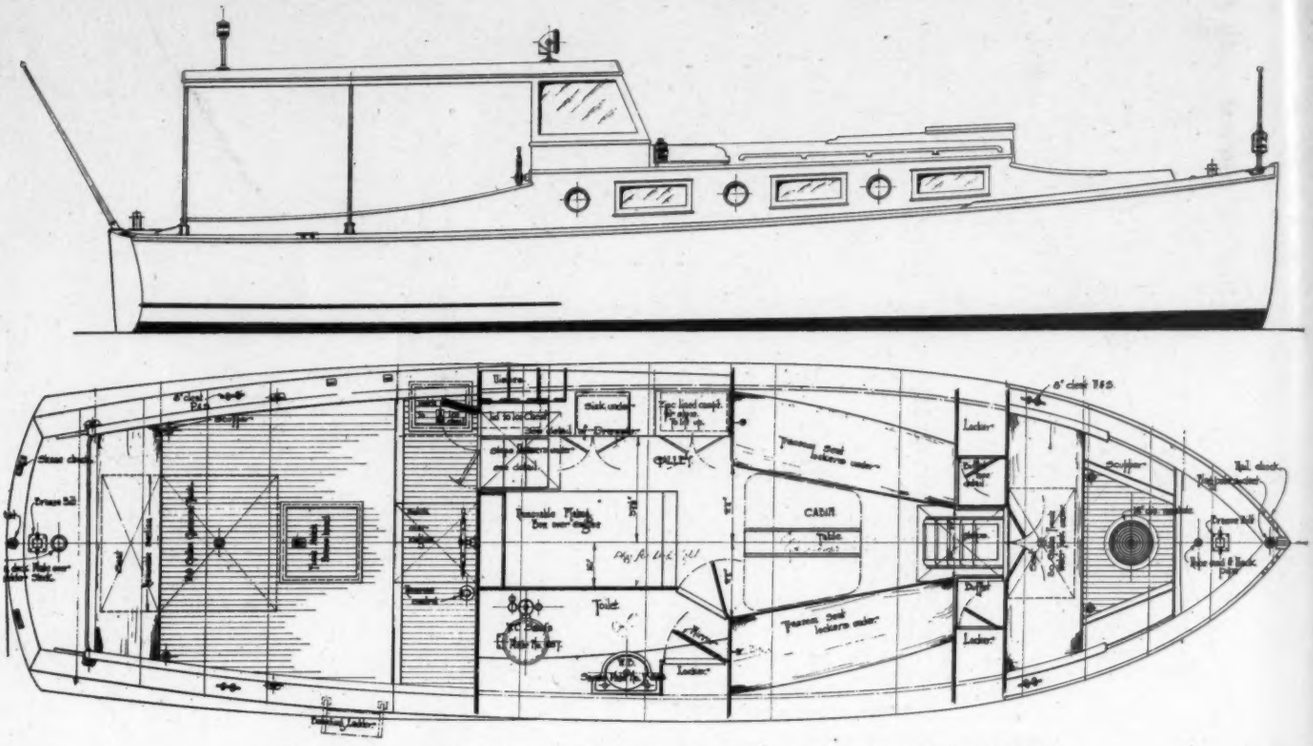
"I have shown low cabin houses with open ports to help ventilation, as on a true Gloucester fisherman it is impossible to get portholes amidships. I have also shown a semi-sunken deckhouse at the extreme after end which will be a great convenience. This can be passed through to the owner's quarters, although there is an entrance amidships. The engine room is somewhat abaft amidships, so that the shaft can be as short as possible.

"The Winton Diesel motor, with ample fuel tanks, assures a splendid cruising radius without refueling, and there are, of course, large water tanks, ample stowage space, etc., for long voyages in comfort."

There are four double staterooms for the owner's party, and the crew's quarters have been worked out for a larger crew than necessary.



Accommodation plan of three-masted schooner yacht designed by J. G. Alden.



Profile and accommodation plan of the 38-foot day cruiser designed by C. A. Nedwidek.

An Attractive Day Cruiser

THE plans shown above are of a 38–foot day cruiser designed by Chester A. Nedwidek, for Mr. J. P. Kelly, of Bay Shore, L. I., and now under construction at the yard of Staples, Johnson & Co., Biddeford, Maine. She is to be used as a combination day boat and fishing boat. Equipped with two cockpits, one forward and one aft, she will be able to accommodate quite a large party when in day use. Two transom berths are shown forward, with a buffet on each side, which will give cabin accommodations for two in case of short cruising. The galley is at the after end of the cabin on the port side. The woodwork in the galley is to be entirely of mahogany and so arranged that the sink, ice chest, stove, etc., will be entirely out of sight when not in use, the appearance of the galley at that time being that of a large mahogany buffet. Opposite the galley is a large toilet room, which is also to be used as a dressing room for bathing. The lines show a boat with good flare forward, which should make her dry when running at top speed; they also show good bearing aft, in other words a good, fast-looking hull. The power plant will be a six-cylinder, Navy type Van Blerck motor of about 200 horse power, which should drive the hull a good 18 miles an hour. Her dimensions are as follows: length over all, 38′0″; beam, 10′6″; draft, 3′0″.

Nordic, a Danish Double Ender

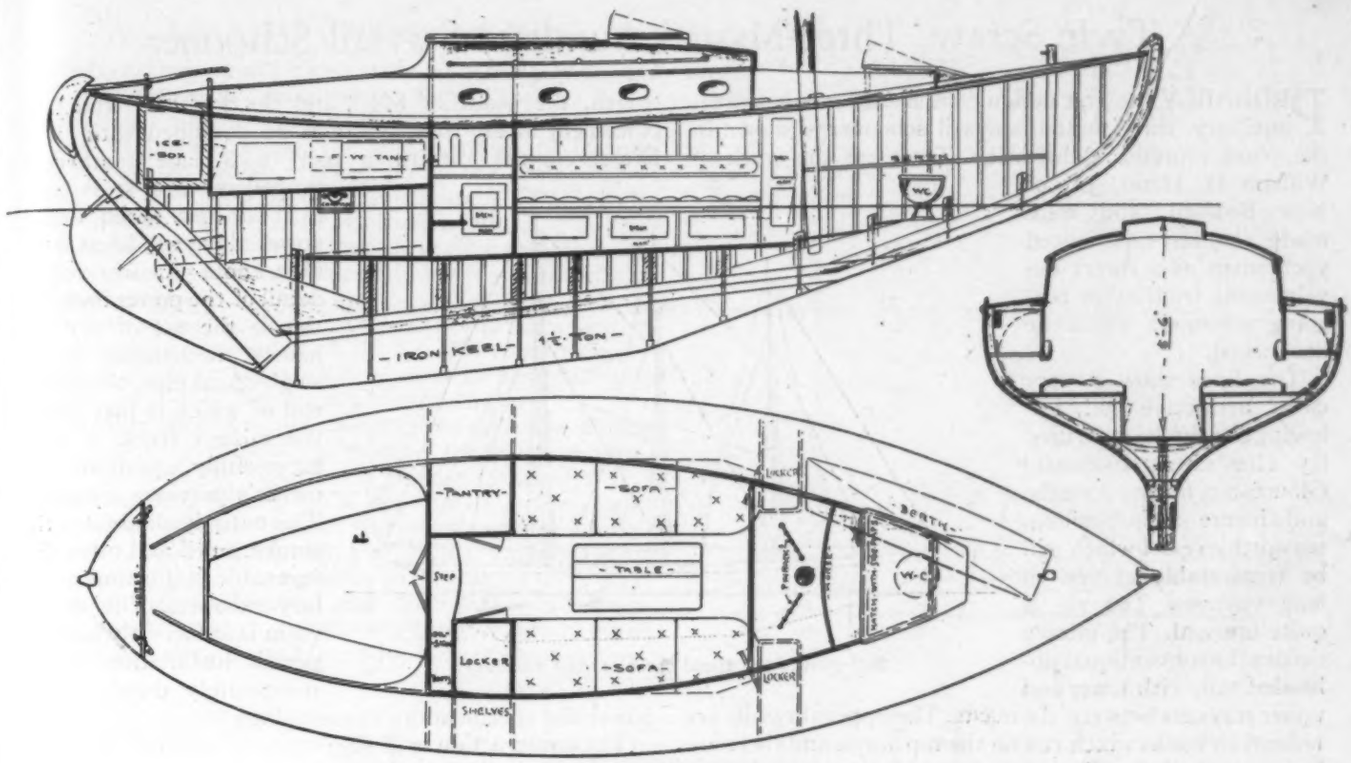
WHILE cruising in Danish waters last summer, Mr. Franklin Remington, whose cruise story, *The Log of the Ariel*, appeared in the March issue of YACHTING, became interested in the small Scandinavian cruisers of various types, with the result that he commissioned Mr. G. Berg, of Copenhagen, to design him a single-handed cruiser of strictly local type. The result is *Nordic*, whose plans appear on this and the next page. She is 27 ft. over all, 9 ft. beam, and 4½ ft. draft, with a jib-headed knockabout rig of 550 sq. ft.

Nordic's short bow overhang and curved rudder post are true to Scandinavian form. Her beam is moderate, and sections are firm without being hard. Her iron keel weighs 1½ tons. The forefoot is cut away more than usual, while the sternpost has a decided rake, which should make her quick and sure in stays, while her lateral plane is sufficient to ensure good windward qualities.

Two berths are found in the main cabin, and a pipe berth forward and small galley aft. The toilet is located forward of the mast, and the ice box abaft the cockpit, with plenty of locker space both forward and aft.

Nordic is being built in Denmark, and will soon be shipped to this country on a steamer. Her home port will be Oyster Bay.

Sail plan of *Nordic*.

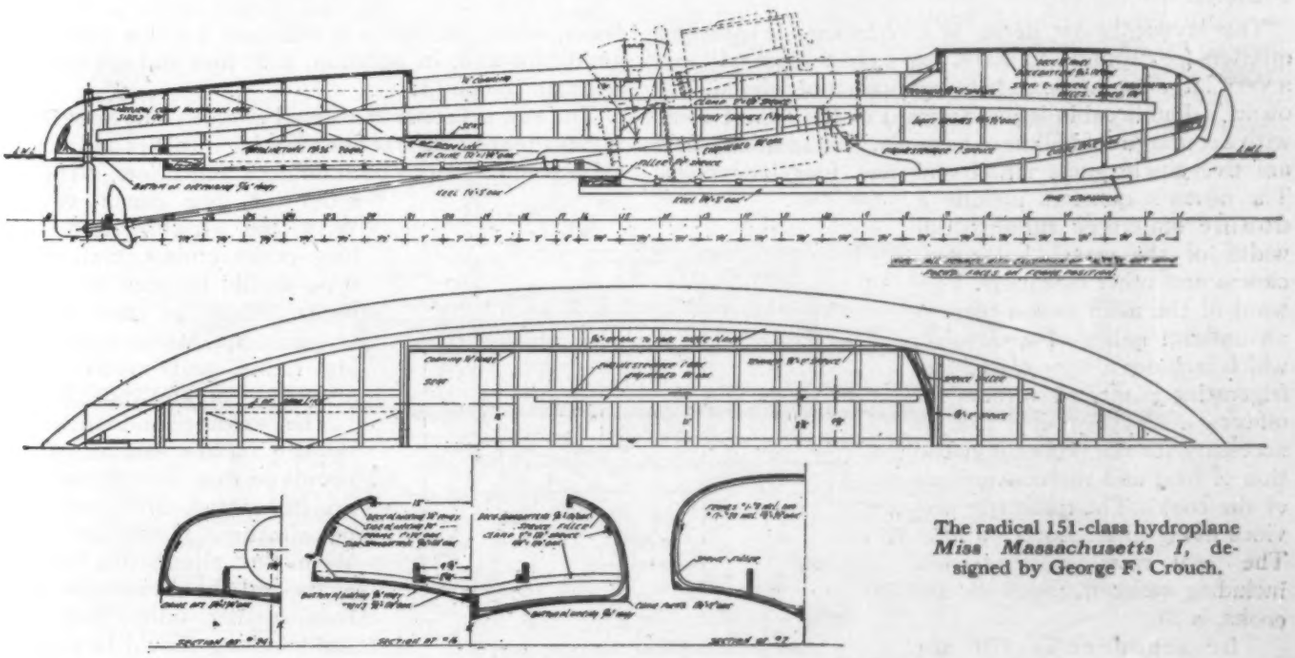


Profile and accommodation plan of *Nordic*, described on the preceding page.

A Single Step Hydroplane Along Radical Lines

TO George F. Crouch the designing of winning boats in various classes of power-driven racers is an old story. His latest venture is in the popular 151 cu. in. racing class. He and the staff of the Dodge Boat Works have designed, and the George Lawley Sons Corporation are building, a 15-footer with 5 ft. beam, with decidedly radical lines, as the plans below show. *Miss Massachusetts I*, as she will be called, is owned by L. T. Savage, of Boston, and the little single step hydro will make her initial appearance in the Boston Gold Cup Regatta. She is powered with a 151 cu. in. motor turned out by Harry L. Miller, the famous builder of automobile racing motors, and is expected to skip over the water at between 65 and 70 miles an hour.

In *Miss Massachusetts I*, George Crouch is thus going out after the championship in the 151-class.

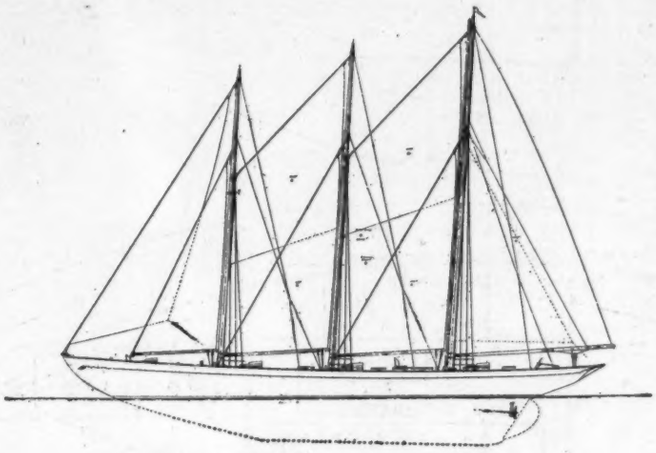


The radical 151-class hydroplane *Miss Massachusetts I*, designed by George F. Crouch.

A Twin Screw, Three-Masted Auxiliary Staysail Schooner

PROBABLY the first design completed for a seagoing, auxiliary, three-masted staysail schooner is shown in the plans reproduced herewith. They are the work of William H. Hand, Jr., of New Bedford, and were made for an experienced yachtsman as a direct development from other seagoing schooners which he has owned.

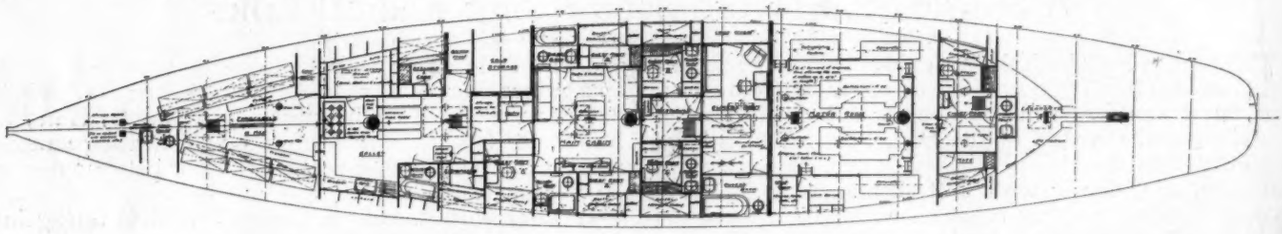
The lines show a very clean, attractive hull, following closely the form used by the most successful Gloucester fishing vessels, and insure a fast-sailing, seaworthy vessel which will be comfortable at sea on long voyages. The rig is quite unusual. The mizzen carries the conventional jib-headed sail, with lower and upper staysails between the masts. The upper staysails are hoisted on hanks which run on the top stays, and there are hoops on the luffs. They clew up and furl aloft as do topsails of conventional type. This vessel carries no bowsprit and all sails are inboard, and therefore easily handled.



Sail plan of the Hand three-masted auxiliary.

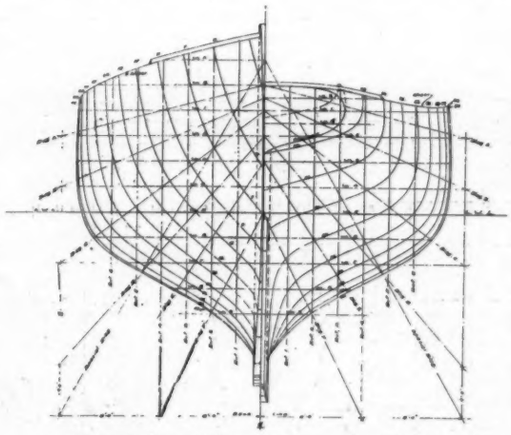
The schooner is 170′ o.a. length, the beam 29′ 8½″, and the draft 15′. Her displacement is 440 tons. She will be equipped with twin Diesel engines turning a pair of 3-blade feathering propellers, and it is estimated her speed under power alone will be at least nine knots. An interesting detail of the power installation is the use of dry exhausts, discharging into a single spiral pipe, the upper end of which is just above the mizzen truck, a plan successfully used on the owner's previous schooner. This entirely eliminates the smoke, smell and other disagreeable features of auxiliary exhausts. The engine room is sufficiently large to permit installation of approximately double the power the specifications contemplate.

The construction is of ship type throughout. She has a heavy oak keel with no outside ballast, a deep keelson on top of the floor timbers, and carries all her tanks, totaling about 20,000 gallons capacity, under the cabin floors, where the space is sufficient for this tankage all amidships and, in addition, a 3′ fore and aft alleyway between the tanks.



Excellent accommodations are a notable feature in well-designed craft of this size and type.

The layout below decks is interesting. It provides quarters for captain and mate, also a chart room, aft, and a very large engine room between main and mizzen. The owner's double cabin is just forward of the engine room with a sound-proof bulkhead between. In addition, there are five single guest staterooms and four bathrooms. The owner's quarters include a double stateroom running full width of the vessel, bathroom, closets and other essentials. Forward of the main saloon there is an unusual galley of great size, which includes a 2-ton electric refrigerating plant, mess room for officers and everything that is necessary for the proper preparation of food and the convenience of the cooks. The forecastle provides living quarters for 12 men. The total crew to be carried, including officers, engineers and cooks, is 18.



The sections follow fisherman practice.

The new schooner is a vessel of handsome appearance, giving great promise of fine seagoing qualities and wonderful accommodations both on deck and below, a splendid ship for long ocean voyages. With the growing interest in long ocean cruises, craft of this type should be seen in increasing numbers, as their comfort, seagoing qualities, large cruising radius and moderate cost are more generally appreciated.

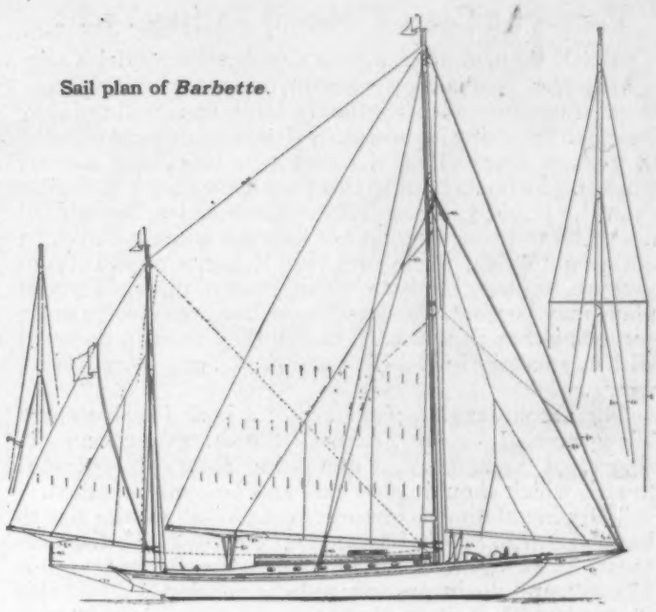
The expected advantages of the new rig are several. Heavy booms on fore and mizzen masts are eliminated, and heavy gaffs on all three masts are absent. With the elimination of these spars and the division of the rig into smaller units than usual, sail handling should be easy.

An Attractive Centerboard Yawl

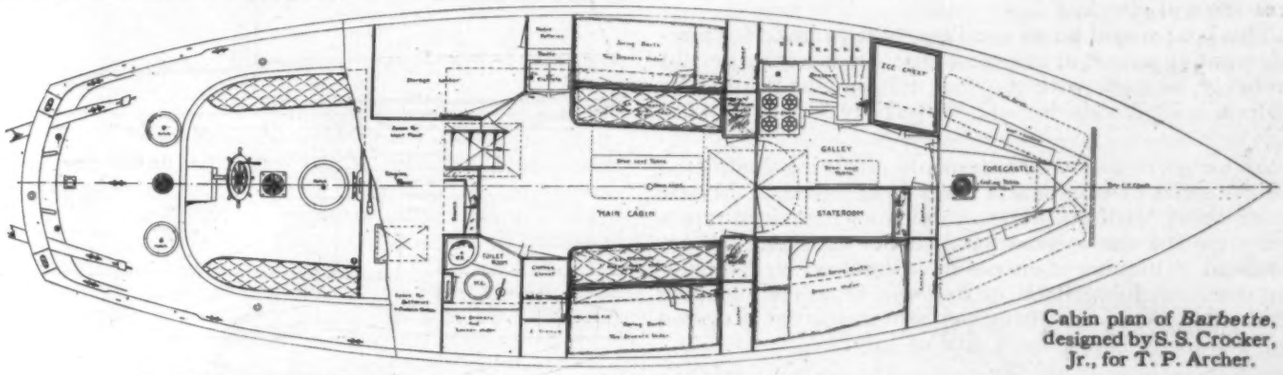
THE accompanying plans show an attractive yawl of moderate draft designed by S. S. Crocker, Jr., of Boston, and built by the George Lawley & Son Corporation of Neponset, Mass., for T. P. Archer, of Detroit, Mich. *Barbette*, which reached her home port early in June, is of the following dimensions: l.o.a., 50′ 9″; l.w.l., 37′ 9″; beam, 14′ 9″; draft, without board, 5′. The ends and freeboard are moderate, the sheer easy and sweeping, and the lines and sections fair and easy for a centerboard craft.

Barbette swings 1,500 sq. ft. of canvas in her yawl rig, all sails being jib-headed. A 65 h.p. Kermath motor is expected to drive her a good 8 miles an hour, while a Delco system will supply electricity for lights.

The accommodation plan is out of the ordinary, having been drawn up to suit the owner's particular requirements. Abreast the companion steps to starboard is a toilet room and locker, while opposite is an unusually large storage room for trunks, suit cases and other duffel. The main cabin is amidships, with a large galley forward of it to port, and a large stateroom to starboard. A good forecastle with two berths, and chain locker completes an arrangement which gives every comfort and convenience for a moderate-sized party for long or short cruises.



Sail plan of *Barbette*.

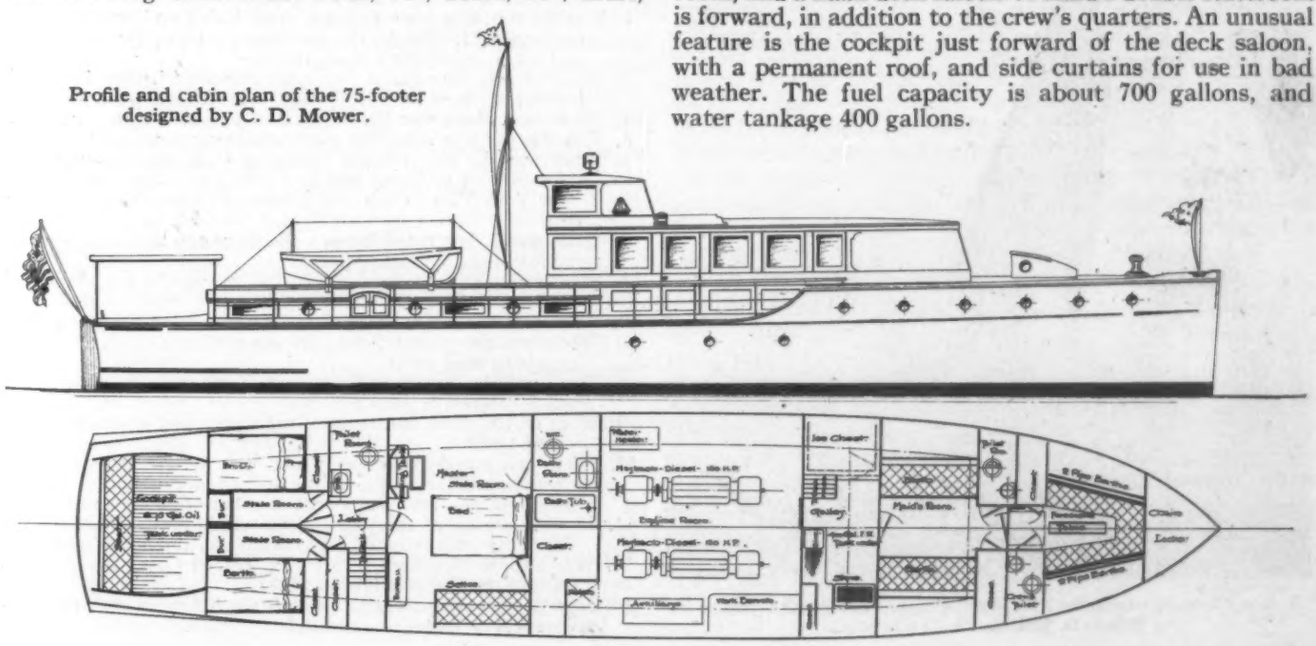


Cabin plan of *Barbette*, designed by S. S. Crocker, Jr., for T. P. Archer.

A 75-Foot Fast Cruiser

THE design below is from the board of C. D. Mower, of New York, and shows an attractive fast cruiser of the following dimensions: l.o.a., 75′; beam, 15′; draft, 3′ 6″. The power plant consists of a pair of 150 h.p. Maybach Diesel motors which should give a sustained speed of around 18 miles an hour. The owner's accommodations consist of two double staterooms aft, with toilet room, and a main deck saloon. A maid's double stateroom is forward, in addition to the crew's quarters. An unusual feature is the cockpit just forward of the deck saloon, with a permanent roof, and side curtains for use in bad weather. The fuel capacity is about 700 gallons, and water tankage 400 gallons.

Profile and cabin plan of the 75-footer designed by C. D. Mower.



Plans of a Class R Model Racing Yacht

SINCE the adoption, a year ago, by the Model Yacht Racing Association of America of the R Class, Universal Rule, with the boats built to a scale of 1½ inches to the foot, this size model has become very popular in certain sections of the country, especially around Boston. The boats built to this class are somewhat smaller than the B and C Classes, Association Rules; hence they are easier to transport and not as much work to build. In addition to this, plans of Class R boats are easier to procure, as many large yachts are built to this class whose plans may be used. The boats have been raced with great success, although in a hard breeze they need to be fitted with a smaller rig than is carried in light to moderate winds.

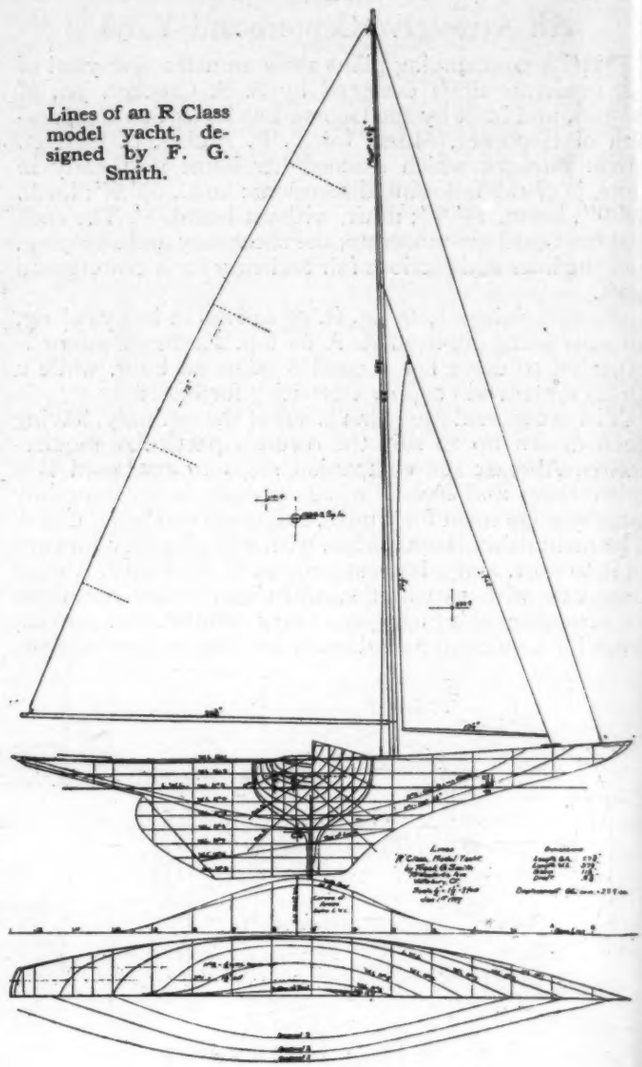
The accompanying plans are of a boat for this class. They were drawn by Frank G. Smith, an amateur designer, of Waterbury, Conn., and show an excellent model, which should prove fast and be easily handled.

The general dimensions are: l.o.a., 57¾" (a nice size to handle); l.w.l., 37½"; beam, 11¼"; draft, 8⅝"; displacement, 23.9 lbs., or 661 cu. in. The quarter-beam length is 35.625", and she incurs only a slight penalty of .21' in this dimension. The sail area is 1334 sq. in. She rates 3.20 with normal displacement and rule sail area. With actual sail area she will rate 28.5.

This boat would be an excellent type to build for anyone wanting a craft of moderate size. Arrangements could probably be made with the designer for blue prints. His address is 73 Woodside Ave., Waterbury, Conn.

As we go to press, arrangements are being completed for the series of elimination races to be sailed on Mystic Lake, West Medford, Mass., to pick an American representative for the international model race at Gosport, England. A number of entries have been received, including one from John Black, of *Bostonia II*, a likely looking contender. Whatever American representative is chosen will sail for England the middle of July.

A new Class R yacht for the West Coast. *Heather*, designed by Edson B. Schock for Al Christie.

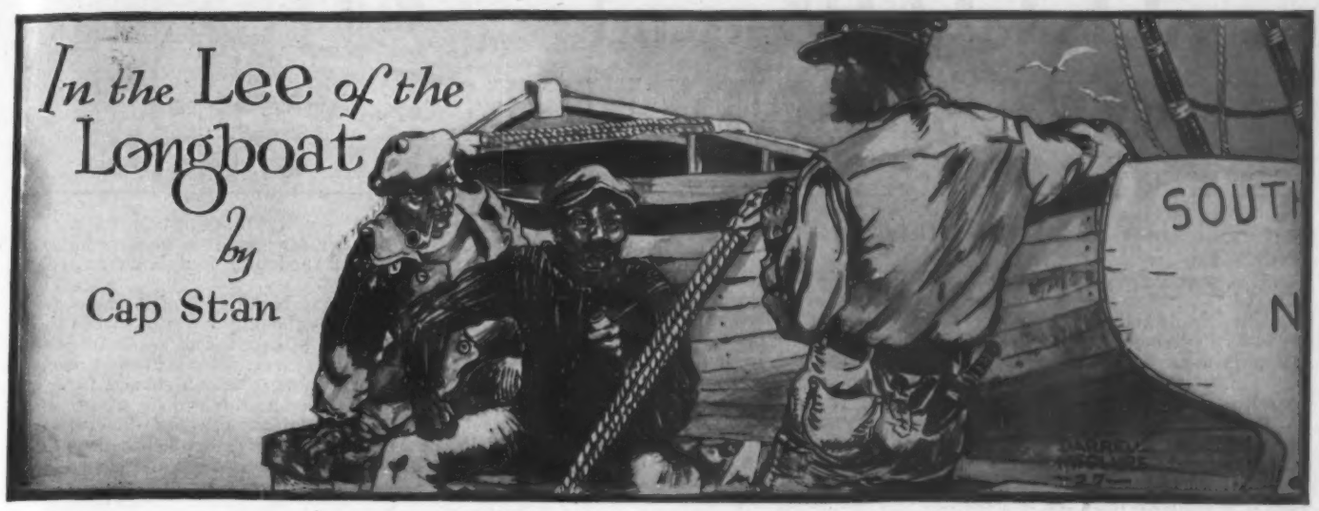


Lines of an R Class model yacht, designed by F. G. Smith.

Ask Me Another!

1. Where and when was held the first international yacht race in which an American yacht competed?
2. Was the cup, now known as the "America's Cup," won at Cowes on August 22, 1851, by the *America*, put up by Queen Victoria and was it originally a challenge cup?
3. Had this race been sailed "on time allowance" (then in vogue) instead of "boat for boat" would *America* still have won?
4. When and where was our oldest existing yacht club organized?
5. Was this the first American yacht club ever organized?
6. When was the Royal Yacht Squadron Cup, now known as the "America's Cup," and won by *America* in 1851, offered to the New York Yacht Club as a perpetual international challenge cup?
7. When was it first raced for as a challenge cup and what was the name of the challenging yacht?
8. What two men served seven consecutive years as commodore of the New York Yacht Club?
9. What was the name of John C. Stevens' most famous yacht?
10. Where was the original New York Yacht Club located and where may it be seen today?
11. When was the first New York Yacht Club cruise held and what was its objective point?
12. What club ran the first regatta in America and when and where was it held?
13. What celebrated American yacht was at one time renamed *Camilla*, later serving as a blockade runner under the name of *Memphis*, and eventually regaining her original name?
14. In what season of the year did the celebrated *Henrietta-Vesta-Fleetwing* trans-Atlantic race take place, and under what rigs?
15. Was *Sappho* victorious in her race against *Cambria* and others, around the Isle of Wight in 1868?
16. How did she compare with *Cambria* the following year and why?

Answers will be found on page 112.



SOME day in the comparatively near future — I hope it will be in the very near future — the windjamming fraternity is going to wake up to a very disagreeable situation. And that is, that the motor boat crowd, thoroughly alive and awake, is multiplying with startling rapidity, and will shortly have the windjammers with their backs against the wall. Every fairly protected body of water will be alive with put-puts, and sailing craft will be in the minority. How will this come to pass? Simply through excellent publicity on the part of the monkey wrench sailors, and the utter lack of it on the part of the canvas crackers. The motorboatmen are wonderfully organized — half the clubs have publicity committees, and also have a central publicity bureau. They are broadcasting the delights of motor boating twice a week through station WABC, and leaving no stone unturned to boost their game.

And the windjammers? Just try and get some dope from practically *any* sailing organization and see how you come out. The windjammers, having no trade affiliations, don't see the need of publicity. There is no one connected with their clubs whose job it is to see that the dope gets to the papers and magazines. It's like trying to extract gold from sea water to get anything out of them — it's nobody's job in particular — the race committee has its troubles — the secretary has his — and it's beneath the commodore's dignity to wrestle with such stuff. Why, I was talking to a reporter on a New York daily the other day, and he came across with — "I can drop into the office any day and hammer out a couple of columns of motor boat publicity, from the stuff which comes through the mail; but it takes a week of hard digging to get enough sailing dope to fill a single column."

The answer is plain: Let every club appoint a man, or committee, to handle publicity, and forward it to the daily press and the yachting magazines. All kinds of stuff: Club elections, meetings, dinners, entertainments; plans for cruises, regattas, races; results of races and regattas; new boats added to the fleet; etc., etc. The papers and magazines will be everlastingly grateful; the clubs will be benefited. Then, and only then, will the sailing game attract its share of newcomers, and hold its rightful position in the sun against the onrushing horde of gasoline-driven craft. Why shouldn't the North American Yacht Racing Union start the ball rolling?

* * *

Judging by the first three championship regattas held on Long Island Sound, Bill Swan's recent article on the right and wrong way to run races received scant attention. The American Y.C. sent the smaller classes around a course on which there was no chance for windward work — it was simply a disheartening procession from one buoy to another. There was very little, if anything, wrong with the Riverside Y.C. race. But the Harlem Y.C. spilled the beans for all classes by establishing a starting line so long the committee couldn't see what was going on at the far end, and at an atrocious angle to the first leg of the course, the latter feature accounting for the numerous fouls and resulting protests, due to crowding at the weather end of the line, no skipper having any choice on which part of the line he would start. To complete the job, the finish line was at a bad angle. Features such as this take all the joy out of racing. A few more such affairs, and there are apt to be quite a few skippers who will fail to attend the regattas held by the offending clubs. Then, perhaps, there will be an awakening. I wonder.

* * *

Although both the Cape May and Gibson Island races will have been sailed when this reaches you, it won't do any harm to make one or two more predictions. *Alert*, ex-*Aquanno*, stands an excellent chance of coming through. She was in a winning position half way through the Larchmont-Gloucester race, but ran aground and withdrew. *Azor* is another dangerous craft. These, with *Butterfly*, should take the honors in Class B, and may have something to say on the corrected time prize for the whole fleet if certain weather prevails.

And here's another prediction: If these, and other fast cruisers, swipe all the mugs and glory, it will bring to a head the question of a rule for classification and measurement for long distance races; for the owners of the heavier displacement schooners, ketches and yawls will have a legitimate howl for a new and fairer rule. If the howl isn't answered satisfactorily, there will be a lot of absentees from the 1928 events.

* * *

I never hope nor expect to own a Diesel yacht. Nor, strange though it may seem to some people, do I covet one — I'll stick to the small boat game until old age and gout relegate me to the farm, where they say all old sailors gravitate. Nevertheless, I was decidedly interested in the different articles in the last issue describing these modern, seagoing homes. For they opened my eyes to the reasons for the big development in this class of craft, and, moreover, pointed out the important fact that these able, seaworthy, comfortable craft of large cruising radius had supplanted the narrow, unseaworthy, and cramped steam yacht of very limited cruising radius. The development of the Diesel type yacht is an important phase in American yachting. Read those articles — you won't regret it.

LETTERS and CORRESPONDENCE

Word from *Firecrest*

Dear Skipper:

I AM at sea becalmed, halfway between Fiji and the New Hebrides, and as I have no auxiliary engine I have plenty of spare time to write my friends and answer the mail which I received in Suva. I do not know if you have seen it in the papers, but on the 20th of August last, while at anchor during a gale in Wallis Island lagoon, in succession my heavy anchor broke, then the cable of my second anchor and I was thrown on the inside reef. After pounding there two hours, I lost my lead keel, the *Firecrest* turned over on her side, passed over the coral reef, and was carried gently on a sand beach.

I was stranded there two months, when a passing steamer was able to make some iron bolts for me. With the help of 80 natives, I managed to bring back from the reef the four-ton keel, and, after some unsuccessful attempts, put it back into place, using cocoanut trees for levers.

I was nearly ready to sail again, when the French stationary sloop-of-war in the South Seas came to my help, and made some bronze bolts for me. Lucky I was, for we found the iron nuts already eaten by rust. All the same, when I got into Suva I had to go on the slip for overhauling, and after three months of hard work the *Firecrest* is in better condition than she ever was, since she is mine.

On the whole it was a very pleasant wreck, for I had many interesting experiences on this primitive island. In fact these South Sea islands have taken hold of me, and I am going back to France as fast as I can sail, to build a new boat of my own design and bring it over here.

Of course I am still in love with the *Firecrest*, but she has a great fault as a single-hander: that she will not steer herself under whole canvas with the wind abaft the beam. My next boat is going to be a double-ender, 32 feet over all, 9 feet beam and 5 feet 6 draft, cutter, Bermudian rigged, but with the mast stepped a little farther aft than the customary rule in a cutter.

In Suva I was lucky to find a copy of YACHTING. Thus I learned that my book was published in the States, and I saw that the publicity was well handled. I learned also the existence and the last results of the Fastnet Cup race. It is in a race like that, that my little ship, well handled, could show her best, and I think she would have stood a good chance against the other British yachts.

Please, would you send me a copy of *Venturesome Voyages of Captain Voss* to the following address: Alain Gerbault, 18 rue Marmoreau, Laval la Mayenne, France. I should like very much to send you my subscription for YACHTING but my addresses are too uncertain. I expect to be in Durban next December, and in France in September, 1928. I hope that I shall have then an opportunity to come to New York.

I am, yours very sincerely,

ALAIN GERBAULT.

Doesn't Believe in Fouls

Editor, YACHTING:

Referring to the interesting article in the May issue, entitled "Some Divergent Racing Tactics," by F. Slade Dale, I take exception to the reasoning of the "younger man" as to fouls.

The very word "foul" suggests something that is objectionable, and as I understand it, a foul in a race is just that. If the "older man" fouls in a race "his day is spoiled"—and so it should be, for he not only puts himself out of the running, but possibly does the same for someone not in any way responsible for the foul. A foul should be avoided at all costs.

"Taking a sporting chance" may be all right if in the event of failure the one taking the chance is the only loser; but when this is not the case no such chance should be taken. This applies to general fleet races. When it is a match race, or a race that is in effect one boat against another, it may be permissible to take a chance, for in the event of failure the boat that is fouled is adjudged the winner. Even in this case, however, the foul is objectionable, as the winner does not have the satisfaction of a clean-cut victory, to which he is entitled.

Mr. Dale's article crystallizes a much-beclouded matter and in my opinion the younger man's viewpoint is open to some criticism.

"OLDTIMER."

New York, N. Y.

More About the Sharpie

Editor, YACHTING:

I was very much interested in Mr. Stephens' article some months ago on the origin of the New Haven sharpie, and I'm sending you a picture of one of the log canoes he speaks about, and two pictures of sharpies. These pictures, which were taken only a few weeks ago, show that the sharpie is by no means extinct. Indeed, during the oystering season there is still quite a fleet of them around the harbor. There was a sharpie yacht building two or three years ago by an old boat builder down on the east shore, but whether he succeeded in selling her or not, I never found out.

I don't think Mr. Stephens' sketch was very accurate, particularly the shape of the bottom, which shows very clearly on one of the photographs. Far be it from me to dispute the New Haven origin of the sharpie, but I think Chesapeake Bay had something to do with it. At least that's what I've always been told, and I seem to remember having seen somewhere, a picture of a Chesapeake Bay boat with a loose footed leg o' mutton sail, and the boom rigged with a snotter like the sharpie.

At least you must give us credit up in New Haven for calling the leg o' mutton sail by its right name, and not after a radio mast!

I confess I count myself among the numerous people who fail to understand what relation the Presto type has to the New Haven sharpie. To my feeble intellect it would seem that no two boats could be more unlike, and I certainly would appreciate further enlightenment.

ALAN CORNWALL SMITH.

New York, N. Y.

What Became of Captain Voss?

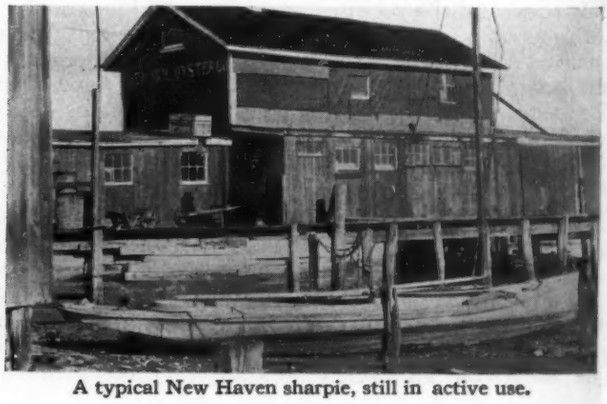
Editor, YACHTING:

Like all sailing men, I am a great admirer of Captain Voss. I read with satisfaction that a new edition of his book has been issued. I have just reread the notice, and I enclose a version of his end which I have never doubted until I saw (on second reading) your statement that he died in San Francisco. Here is what I have heard of his end:

Captain Voss sailed from Yokohama in *Tilikum II* early in January, 1914. *Tilikum II* was built in a little yard about 10 miles out of

(*Continued on page 106*)

A New Haven log canoe.



A typical New Haven sharpie, still in active use.

Books for the Yachtsman's Library

Cruises in Small Yachts
By Harry Fiennes Speed, and

More Cruises
By Maude Speed
Imrie, Laurie, Norie and Wilson, Ltd., London

THIS book, as the title tells, is a compilation of short cruises about the south coast of England, and the Channel ports from Cherbourg to the Zuyder Zee. The cruises were made in small craft — cutter, yawl and boats of the Mersey canoe class, and small steam launches. It will, with its maps, no doubt be of value to such as think of cruising about the English Channel — those who sail along the south coast of England, and back and forth across the Channel to the quaint French ports.

It is mainly interesting to us in this country as showing a life-long devotion to the sport of sailing — the lure of the water, to feel oneself water-borne — the homing to the water like a duck — on the part of Mr. Speed and his wife. He was fortunate in finding a wife who shared his love of small yachts and yachting; who was willing to share with him the joys of small craft, as well as their discomforts, through the many years they sailed together. Fortunate indeed is the sailing man who has such a wife, for many a man finds he has to give up sailing when he marries.

The book is a simple story of small craft, the little adventures which would fall to the lot of any one on short cruises; and underneath it all the clean and natural love of boats for their own sake — the pleasure of thinking out the kind of boat best suited to their needs, of having it built, and of sailing it. No one who is not a sailing man can understand this. There is a satisfaction and enjoyment not to be found in motoring or any other kind of sport. As Mrs. Speed says, there is an attachment formed for a little boat, in which one has lived and sailed, comparable only to the attachment which might be formed for a living person. Those of us who have owned little yachts know this feeling of affection. We never leave a boat without looking back at her with an admiring glance, and when we part from her finally it is like parting from a dear and valued friend.

The style of the book is not such as will appeal to many of us in this country any more than we can have patience to sit out an English cricket match; but at heart we can understand the sportsmanship and the love of the sea in its gentler moods which prompted the writing.

J. E. MACRAE.

Elijah Cobb, the Memoirs of a Cape Cod Skipper

Yale University Press—1925

THE vigor of those early seagoing men of New England lies on every page of *Elijah Cobb, the Memoirs of a Cape Cod Skipper*. Captain Cobb lived from 1768 to 1848, during those days when the sea was the source of livelihood to much of America.

His going to sea at the age of fourteen was an accident. As he himself put it, "I broke a vefsell in my stummick" and the doctor then sent him to sea for his health, as a cook. His first trip was somewhat difficult, but "after the opperation of David Jones's medecine (sea-sicknefs) I felt my health improved." The method of expression throughout is both amusing and accurate, seldom leaving doubt as to the meaning.

It took Cobb about eight years from this first voyage to Surinam, or Dutch Guiana, to assume the duties of master. He was in France during the revolution, and spoke very casually about seeing Robespierre beheaded by the guillotine. He had the canny New England faculty of thrift, both in dollars and in words. But when it came to describing his efforts to procure his just due from the government of France he waxed loquacious. The details of his interview with Robespierre, shortly before the revolutionary leader met his fate, are most amusing, and serve as a strong indication of the character of this Yankee ship master.

During the War of 1812 Captain Cobb fell prey to the British Frigate *Jason* and was taken to St. Johns, where he was accorded royal treatment. The autobiographer records, with an almost cold-blooded nonchalance, incidents of war that must have been thrilling experiences. The word "adventure" hardly seems to be in his vocabulary.

Captain Cobb had command of many ships in his day, among them the *Monsoon*, the brig *Sally and Mary* in which he achieved the honor of displaying "the first American flag ever wafted over their City," speaking of Lubec, in Germany, the *William Tell*, and the *Ten Brothers*.

Any lover of the sea will enjoy these memoirs. The spicy sentences should prove entertaining reading when riding out a storm in some snug harbor.

J. G. S.

A Glossary of Sea Terms
By Gershom Bradford
Yachting, Inc.—1927

THERE has long been a need for a dictionary of sea terms in this country. The language of the sea is not alone a vernacular of a hard life, but its terms are rugged, terse, picturesque and romantic. And with the passing of the sailing ship the language of the sea is in danger of falling into disuse unless yachtsmen, and those who still follow the sea for recreation, are careful in the use of a vocabulary which befitted the calling in which it was used. Therefore, this volume by Gershom Bradford, himself a Master of Sail and Steam, will do much to preserve a language which so fittingly belongs to ships and seamen.

Only recently the newspapers of New York, in reporting the court martial proceedings on the grounding of a battleship, made the statement, in referring to the testimony of a witness, that "the rest of what was said was couched in such nautical language as to be intelligible only to seamen." Yet how else could it have been said?

A Glossary of Sea Terms not only gives the definition of words used by seamen, but also explains, in many cases, their derivation and their special use. It contains, also, diagrams of rigging details on sailing ships and schooners, of sails of the various square and fore-and-aft rigs, and has much useful information for those who want to use the language of the sea correctly and desire to keep their speech as seagoing as their yachts. For sailors the world over are prone to judge those with whom they come in contact by their vernacular. A man who does not talk like a seaman, who does not speak the language of the sea, or who does not use the terms a sailor uses is, to them, no seaman.

(Continued on page 112)

The Sea Sled makes a fine boat for rough water use at high speeds.

Of Interest to the Skipper

The Birth of the Sea Sled

IN 1905 Albert Hickman, himself a salt water enthusiast, became interested in speed hulls. It was a small boy in a tough little flat bottom skiff, propelled by a couple of rough, home-made oars, with inverted horse shoes for row-locks, which caused him to exclaim — "There's the fastest thing of its power afloat. I'm going to look into it."

His first investigations led him at an early date to experiment with the so-called scow type, which seemed to develop more in the way of speed with a given power than anything in the way of a displacement hull. To eradicate the bow wave he installed metal plates projecting below both sides of one of his models, thus compelling all displaced water to pass under the bottom of the hull. This resulted in a perceptible increase of speed, due to the fact that the ordinary bow wave is partly loaded with air forced into it by the shock of the driven hull. Hence, this wave passing under the bottom of the boat offered a lessened skin resistance than that of solid unbroken water.

Mr. Hickman succeeded in producing a motor-driven scow of comparatively moderate power which, in 21 races, scored 20 firsts.

During the next few years the hull had been developed to a point where it was possible to secure patents on special design and Mr. Hickman was experimenting on propeller installation.

When, about 1911, he showed his first model of a surface propeller to one of the old "high liners" of hydroplane speeds he was told that if he were ever foolish enough to build a boat according to the model, she would simply sit still and kick the whole Atlantic Ocean straight up into the air.

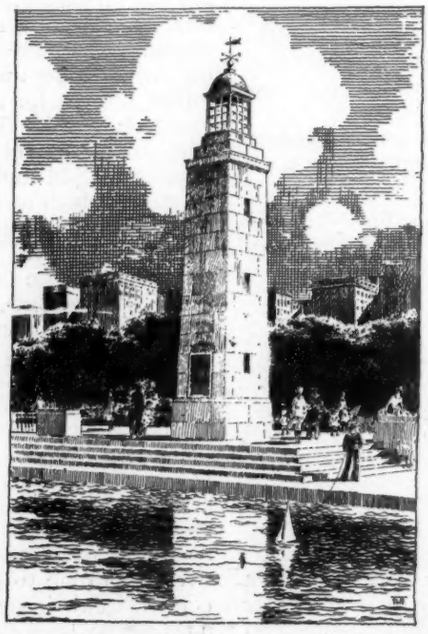
The boat was built and the prophet, however sincere, was proved entirely wrong. This was still in the early days of power boat speeds and Mr. Hickman's fully developed Sea Sled with twin engines and twin screws, working in opposition to each other, attained a speed in 1921 of just past 70 miles an hour. But speed, no matter how phenomenal, is not by any means the most important feature of the Sea Sled. The Sea Sled hull during these years of experiment has evolved to a point where it is the most seaworthy craft of its inches afloat.

Today it incorporates the principles which give stability to the catamaran and the South Sea outrigger type. The only trace left of the parent scow is the rectangular deck plan. The sides, from top to bottom, fore and aft, are as straight and flat as the sides of a sled. The fore part of the hull is cut away in an inverted V. Thus there is no side wave, and all spray goes under the hull to come out a few feet abaft the transom in a towering white plume. This plume in force and direction is not only a gauge as to the speed of the hull, but it is also a sign-manual or trade-mark which differentiates the Sea Sled from anything else afloat. And for the peace of mind of timid folk a reminder might be in order that before you see that spray you've left it. It can never get back to where you are. You are going too fast.

The flat side and "W" bottom places the sections of superior buoyancy directly under each gunwale. This means that the Sea Sled will not capsize, will not cant down disconcertingly and will not roll when running in the trough of a heavy sea.

The surface propeller runs hub deep, with half its diameter exposed when the hull is underway and the combination of hull design and propeller installation not only prevents any drag or submergence aft when the hull is driven at speed, but the speed of the boat actually controls the water line at a constant height at the stern. The Sea Sled, instead of planing bow up and stern down, comes up with a level deck fore and aft until she has risen to the hub of her propeller.

Mr. Hickman's inventions have produced a speedy little marine runabout which is dependable, comfortable and dry at all times; it is as easily handled as a car, and is an extraordinarily safe, fast small craft in a heavy sea.



The proposed memorial at East Boston to Donald McKay, builder of the famous *Flying Cloud,* and other well-known clipper ships.

Motor-Driven Bilge Pumps

A new motor-driven pump well suited for general yachting use has been produced by the Trimount Rotary Power Company, East Dedham, Mass. The outfit is compact, will lift without priming and is useful for pumping bilges, transferring oil or gasoline, flushing decks, or it will perform any pumping need aboard yachts. This pump is built in three sizes and priced very moderately.

The same firm manufactures bilge strainers, and its line of rotary hand pumps is very complete. Descriptive circulars will be mailed upon request to readers of YACHTING.

Richardson "Cruisabout" Dealers

The growing interest in standardized cruisers is evidenced by the many distributors that have been appointed for the new Richardson 26-foot "Cruisabout." Although this cabin cruiser was first announced at the National Show in January, where it attracted much favorable comment and created a distinct sensation by being priced at $2,885 complete, distributors have already been established in nine of the leading marine centers of the country.

The "Cruisabout" is being handled in New York by Wilbur H. Young at 206 W. 59th St. The Boston home is with the Noyes Marine Sales Company, 857 Commonwealth Avenue. In Philadelphia, the new boat is being sold by the Marine Equipment & Supply Company, 116 Walnut Street. N. J. Shea, 1424 Lauderdale Avenue, Lakewood, Ohio, is the Cleveland distributor.

The fame of the new cruiser has spread to the Middle West and even to the Pacific Coast. In Chicago the boat is being handled by H. S. Cody, 105 S. LaSalle Street. The San Francisco distributor is the Berg Lumber & Shipping Company, 16 California Street.

In the Southwest, the boat is being represented by August C. Bering, 701 Polk Avenue, Houston, Texas. The Washington distributor is William Knox, 700 Woodward Building. The boat is also being handled by L. J. Stevenson, Gra-Jac Gables, Holland, Mich., and A. T. Underwood, Lakewood, N. Y.

Ever since the initial announcement of the "Cruisabout" the production facilities of the Richardson boat works at the barge

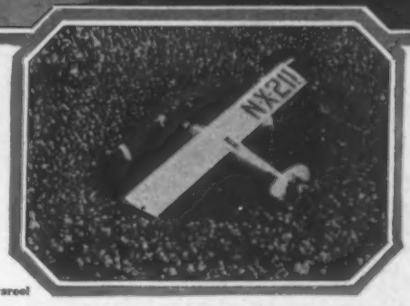
COLONEL CHARLES LINDBERGH

Times Wide World

Lindbergh preparing to hop off for Paris in his Valsparred Ryan plane.

P. & A. Photos

Our unofficial Ambassador to France about to pay his respects to Mme. Nungesser.



Inter. Newsreel

Lindbergh lands at Croyden Airdrome where Londoners give him a tumultuous welcome.

All fly in Valsparred Planes—

LINDBERGH, CHAMBERLIN, BYRD

ON the wings of the wind they flew—through storm and fog, over a wilderness of sea—to magnificent new achievements.

Others may duplicate their feats, but none can dim the renown these pioneers of the air have won.

That Valspar and Nitro-Valspar were chosen for finishing all three planes is not a mere coincidence; it is a verdict.

VALENTINE'S
VALSPAR
The Varnish That Won't Turn White

Chamberlin and Levine in their Valsparred Bellanca monoplane winging toward Germany.

P. & A. Photo

Byrd's giant Fokker is Valsparred from stem to stern.

Times Wide World

The *Whistler*, at 30 miles an hour over a heavy dew. Built by the Free Bottom Craft Co.

canal terminal in North Tonawanda have been taxed to the limit to keep abreast of the influx of orders.

Marblehead Anti-Fouling Green

Marblehead Anti-Fouling Green Bottom Paint is manufactured by the Stearns-McKay Manufacturing Company of Marblehead, Mass., and has been very popular for many years. This paint has a clean, slippery and smooth finish which is very essential on the underwater body of racing yachts. Marblehead Green is especially adapted for use in tropical waters as protection against the destructive teredo. It is particularly good to retard the growth of barnacles, borers and marine growth.

This paint, according to the makers, covers twice the area of ordinary bottom compositions and is supplied in two luminous shades of green, emerald and white, as well as in cream white.

Toppan Brings Out a New Outboard Model

A new model of the sturdy Toppan Outboard Motorboat is available this season. It was designed primarily for use with the new, higher-powered outboard motors and is so strongly built that it will stand up under the severe strains set up by these powerful motors.

The demand for this type of Toppan boat last season was so great that the production for 1927 has been largely increased. The new model, in addition to having all the features of the older model, such as plenty of displacement aft to prevent squatting and fine seagoing ability in rough water, has the following improvements: The stern of the new model tumbles in above the water line slightly, giving the boat a fine appearance; it has light weight steam bent oak ribs between the sawn frames, which increases the life of the boat greatly, holding the planking securely in place with more fastenings and preventing the seams opening up under strain and vibration. The 1927 price of the 15-foot model is $115, and the price of the new 12-foot model will remain at $96.

These popular sizes, together with the special 16- and 18-foot models, which are built to order, may be had in combination with outboard motors at a special price.

The famous Toppan Sea Dog is being produced in large quantities at the Toppan Plant to meet the demand received for these big, husky, seagoing, 22-foot and 26-foot double cockpit runabouts.

A Nautical Exposition in Paris

The Second International Nautical Exposition which is to be held in Paris, France, under the auspices of the President of France, will open in the Grand Palais of the Champs Elysees on October 28th, and will continue until November 13th. The 1926 exposition was a great success and the volume of the business transacted there decided the officials to make this exposition an annual affair.

The exposition will be devoted to every feature of water sports, as well as to the industrial and commercial aspects of the building and outfitting of boats. Inquiries regarding the exposition should be addressed to Mr. Massieu, General Commissioner, 21 Avenue Champs Elysees, Paris, France.

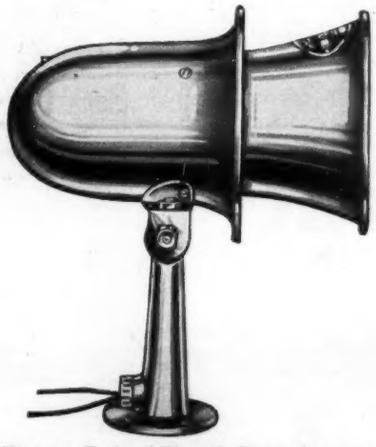
A New Electric Siren

A new electric siren for use on yachts is announced by the Federal Electric Company. This siren is entirely enclosed and is extremely simple in construction. It is of stream-line design and all visible parts are heavily nickel-plated, but may be had also in brass finish. The siren may be adjusted to either a vertical or horizontal position and the motor may be had in any voltage from 6 to 250 volts inclusive.

"Tops by Kroh"

Many of the finest runabouts in the United States are equipped with tops made by the C. Z. Kroh Mfg. Co., Toledo, Ohio. This firm also manufactures cushions and pillows for yacht use, and has been in business for many years.

Self-measuring blanks are available upon request and these enable one to have any required items "tailor made" to exactness.



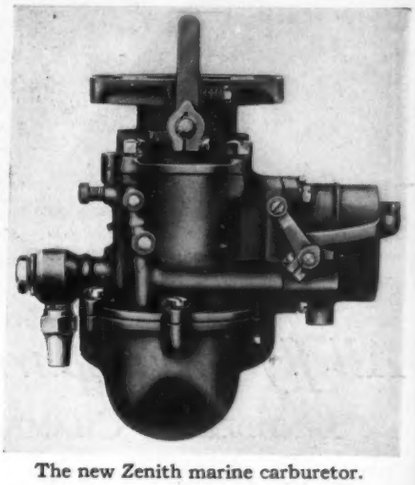
The new Federal Electric Siren of power boats.

A New Marine Carburetor

The new Zenith marine carburetor is a distinct advance in the science of carburetion in the marine engine field.

The rapid expansion of the marine engine industry demanded that there be produced a carburetor that would have all the good points of the regular automobile carburetor, plus the improvements called for by the particular problems encountered in marine engines.

An inspection of the new Zenith marine carburetor shows that the manufacturers have met these problems in a most satisfactory manner. The new carburetor may be tipped 60 degrees fore or aft and inclined 45 degrees to port or starboard before the action of the carburetor is changed. Quick turns or sudden stopping of the motor will not wash fuel away from, or over, the jets.



The new Zenith marine carburetor.

The air intake is set above the bowl, giving that much more height to make possible overboard draining in case dirt should get under the needle valve, as the bowl is directly under the barrel, and any condensed fuel will drain back into the bowl so that this common cause of a gas-laden bilge is removed. The manufacturers claim that this new carburetor contains no metal that will rust. All parts are of brass except the needle valve, which is made of non-corrosive Monel metal.

The manufacturers of Zenith carburetors have also perfected a marine fuel filter which provides the yacht owner with a really efficient device to insure clean engine fuel. Conditions under which fuel is tanked into motor yachts often causes dust and dirt to get into the gas and this filter, which is very simple in construction and easy to install, should find a hearty welcome on board motor boats.

A New Talking Machine

One of the familiar pieces of yachting equipment, which is found almost everywhere afloat, is the portable talking machine. Its compactness permits of stowing it away in very small space when not in use, and it can be moved from cabin to deck in a moment.

A new "portable" has just been developed

(*Continued on page 111*)

BANFIELD SEA SKIFFS ARE BUILT TO ENDURE

FACTS not fancies dictate the fashion in motor boats today. Banfield's popularity is due not only to the smart appearance of these sporting looking craft but to their lasting qualities and wonderful sea going capabilities as well. Built to meet the new demand for speed, luxurious accommodations and riding comforts, Banfield Sea Skiffs are equipped to offer the utmost in phenomenal performance and to satisfy the sophisticated tastes of the most exacting yachtsman. Their distinguished appearance distinguishes those owners who have selected Banfield Sea Skiffs.

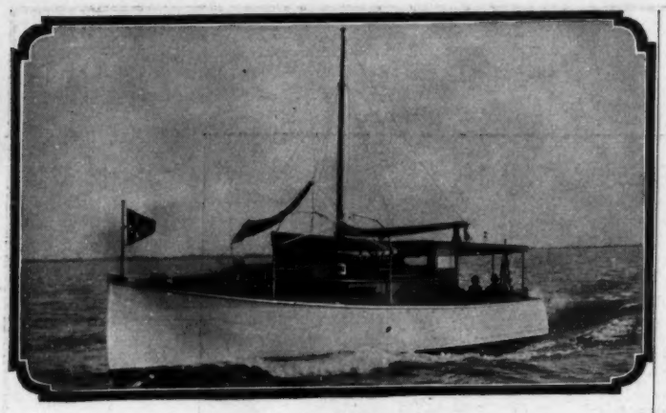
There is a size and speed adapted to your requirements with power by Kermath

18 m.p.h., $4950 **24-26 m.p.h., $12,200** **20 m.p.h., $10,500**

BANFIELD SEA SKIFF WORKS INC.

Largest Builders of Sea Skiffs in the World

ATLANTIC HIGHLANDS, NEW JERSEY.



Matthews Recommends *Cutless Rubber Bearings*

AT comparatively trifling cost, you can have Cutless Rubber Stern or Strut Bearings supplied on your Matthews Cruiser, in place of a metal bearing.

The builders of Matthews Cruisers recommend Cutless Rubber Stern and Strut Bearings because of their longer life, their elimination of shaft scoring and vibration, and the fact that they outwear all other types of bearings.

By specifying Cutless Rubber Bearings for your Matthews Cruiser, you will avoid the expense of bearing renewals and the possible annoyance and delay of mid-season haul-outs for replacement. For best results, bronze or Monel metal shafting is highly recommended.

Write for the new catalog of Goodrich Cutless Rubber Bearings

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Established 1870 Akron, Ohio

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Goodrich
Cutless (Rubber) *Bearings*
—FOR STERN TUBES AND STRUTS

Convict Castaways of the Okhotsk

(*Continued from page 53*)

heavily bearded, dressed in shirt and breeches of that strong coarse linen cloth which the Russians know so well how to make; dirty, some of them belted with braided flax, others with interwoven rags. Three of them wore long Russian boots, evidently the discard of officers; the others thick and heavy hobnailed shoes; two of them also carried a thick bandage of rags around the left ankle concealing (as we learned sometime afterward) the heavy iron badge of their servitude.

In general, they were men of medium size, but I well remember one fellow, who sported a most amazing rag-tag turban, as a very tall man with a long and wide spreading black beard. Another was suffering badly with the toothache, which I was later to relieve by extracting the offending member, and I am bound to say that his conduct during the operation was in every way exemplary. A third was a young fellow of perhaps 25, a cobbler and already bent by his trade, his cheeks covered with that down which is characteristic of the man who has never shaved. Another, the spokesman, and ready enough with his tongue, too, was of slight build with a bright red beard and blue eyes; later we found out that he was a Nihilist.

Some of their story has already been told, and the rest of it follows. Nearly two weeks had passed since they embarked, the last two days of which had been without water, due to their ignorance and carelessness in leaving their oaken water keg uncovered to the salt spray. Rain water wrung from their clothing had helped a little. A double handful of uncooked rice was all that remained of their food. The clothes they stood in, two axes, a square sail made of portions of clothing sewn together with thread laboriously picked out and rinsed (this was the reason for the care they had bestowed on the sail), a broken oar for a yard arm and an oar for a mast were their sole equipment. The burden of their song was that they were political prisoners, unjustly punished, who wanted to get to America. Would we take them? I looked at my mate, and my mate looked at me.

"We are going to have a nasty night, aren't we?" I said.

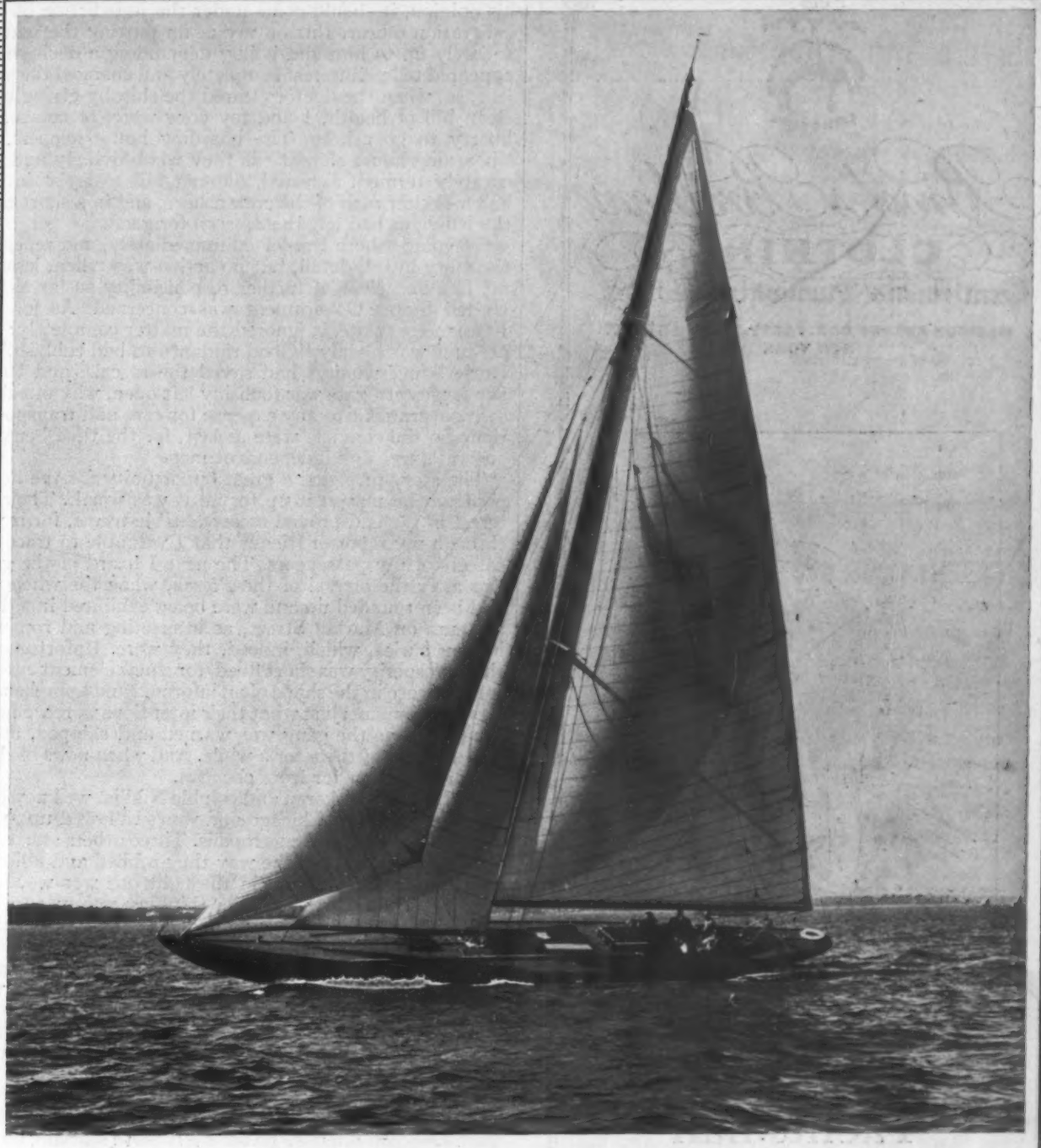
"Yes," he replied, "that boat won't live through the night."

"I don't see but what we'll have to take them," I continued. "We can't let them drown; perhaps when we see the *Cape Horn Pigeon* Captain Scullun will take some of them, he's short handed. Have a place fixed up in the forehold and let them sleep and eat down there, divide them up in the watches and make them stand watch. And be sure to make your entry in the log and have it signed by the second mate or some of the others."

They worked well, they did the best they could, literally between the devil and the deep sea. They even learned to go aloft after a fashion, and as it was nearly two weeks before we spoke the *Pigeon* they had time to become fair sailors, their health and appearance were improved and they had succeeded in removing the remaining shackles with hacksaw and files "borrowed" from the carpenter.

The *Pigeon* took five, a most welcome addition to her crew and a great relief to us, for, up to the time of the transfer, the gang (to the consternation of the mate), had devoured no less than 1,100 pounds of hard bread and gallon after gallon of molasses in addition to the regular fare. This was an amount of food which would last our ordinary ship's company a month and a half or more.

On November 3rd, the bluff bows of the good old *Morgan* again parted the waters of the Golden Gate, and the *Pigeon* came in about a week later. I reported at once to the custom house boarding officer, giving full details of the rescue and the transfer of five men to the *Pigeon*, but



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One of the fourteen One-Design Sloops built, from our design, by ABEKING & RASMUSSEN of Bremen, Germany, on behalf of whom, as sole American agents, we are prepared to furnish estimates and accept orders for the construction of all types of yachts and vessels up to 200 tons, from our own designs or those of other naval architects. The extraordinarily high standard of workmanship set by these builders in conjunction with exceedingly low prices offer unusual opportunities for all yachtsmen interested in building.

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A copy will be sent to anyone mentioning

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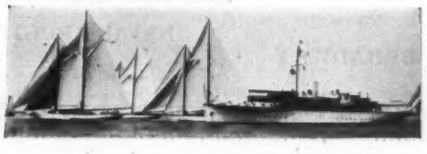
he was unwilling to pass upon the case, stating that, in his opinion, it should come under the jurisdiction of the emigration officer. But on my again putting the matter squarely up to him and boldly demanding a decision he appeared to lose interest completely and changed the subject; so, when the doctor cleared the ship by giving us a clean bill of health, I and my crew were, of course, at liberty to go ashore. The boarding house keepers, or "boarding house sharks" as they were lovingly and accurately termed, as usual, did not fail to assist in the helter-skelter rush of the crew ashore, and in a short time the Russians had left the *Morgan* for good.

On going ashore I reported immediately, and repeated the story in full detail, but no action was taken, leaving me free and clear of further responsibility so far as the United States Government was concerned. As for the Russian consulate, it ignored the matter completely; the attitude was plainly "Good riddance to bad rubbish." If Uncle Sam's whalers had saved the rascals, and Uncle Sam's western gate was foolishly left open, why put their own government to any expense for care and transportation? So the convicts were at last, for the time being at any rate, free and independent men.

The story provided a great opportunity for the newspapers, who played it up for all it was worth. Their interest in the end proved most valuable to me, for it was through my reporter friends that I was able to trace the careers of my passengers. The next I heard of the gang was after the arrival of the *Pigeon,* when the whole ten had been rounded up and were being exhibited in a dime museum on Market Street, as interesting and romantic human curios, which, indeed, they were. Unfortunately their prosperity was short lived, for a new element entered into the case in the shape of an informed and apprehensive city government; just what their intentions were we never found out, as the gang was warned and skipped, and I lost all trace of them for a while. And when news of them did arrive it was far from cheerful.

Of the red-whiskered and voluble Nihilist we know only that he drifted to Chicago and was swallowed up in the masses of the central metropolis. Three others started on foot for San José. On the way they robbed and killed an unfortunate farmer, and in the fight one was wounded. His two comrades, in panic, thinking vainly to avoid detection, set upon their wounded shipmate and killed him — the old principle of "dead men tell no tales." They were caught, and later hanged. The remaining six also pursued a career of crime and some of them were given terms of imprisonment — a hard ending, and to me a considerable surprise, for during my brief acquaintance with them they had shown some good qualities. It is to be regretted that they did not have a better chance.

Some criticism has been directed at me and my mate for our parts in this affair, but the criticism is ignorant, as such criticism often is. To have left these starving men to the mercy of the elements would have been cruel and inhuman, an act unworthy of civilized men. Indeed we could not have done this even if we had been able to foresee the future. Nor, while they were on our vessels was there anything in their conduct to betray any ferocity — quite the contrary, as I have already noted, they behaved very well. In my opinion (and Captain Scullun agreed with me) it is easily within the bounds of possibility that, properly handled, some of them, at least, would have become useful members of society.



510 Class—10 miles

1. Dart . . . . . "1701-N"—Littin
2. Other 26-foot Runabouts . . "Alice Jean"
3. Other 26-foot Runabouts . . "Josephine M"
4. Other 26-foot Runabouts . . . . . "Vamp"

Free-for-all—12 miles

1. Dart . . "Whitecap II"—Ricaby
2. Other 26-foot Runabouts . . "Lo Tom"
3. Other 26-foot Runabouts . . "Alice Jean"

Dart design and construction permit utmost speed from any given motor

E. M. LITTIN
Maumee River Yacht Club

Mr. Littin makes his business a hobby. He is the Toledo dealer for the Dart. After his Memorial Day win in the 510 Class he said: "The result was no surprise to me. It merely intensifies my enthusiasm for the Dart Runabout. In my 25 years in the business I have never seen a better designed or finer constructed boat. I only wish that other Toledo Dart owners had had their boats sufficiently broken in for racing so that we could have made a clean sweep."

Mr. Littin behind the wheel of his winning Dart. In the background is the home of Mr. Ricaby, prominent Toledo Realtor, who won the Free-for-all with his Dart Runabout.

Dart walks away with both Runabout Events at Toledo regatta

Heretofore no mention of or claims for the speed of Dart Runabouts have been made. However, the results of these races justify the statement that Dart design and construction permit utmost speed from any given motor.

Mr. Littin's Dart was powered with a Capitol Curtiss 90 h. p. motor. His time over the 10-mile course was 19 minutes and 15 seconds, an average of over 31 miles per hour.

Mr. Ricaby's Dart was equipped with a Cross Keysor 200 h. p. engine. His time over a 12-mile course was 17 minutes and 32 seconds, an average of better than 34 miles per hour.

The accompanying photograph of Mr. Littin's Dart under way demonstrates the low angle at which a Dart planes. This is a distinct feature made possible only by perfect design and superior craftsmanship. Another advantage lies in the fact that the rear passenger compartment is free from spray.

If your heart is set upon possessing a boat in the small craft class, you should, in justice to yourself, investigate the Dart 26-foot Runabout (10 passenger capacity). Or if a smaller one appeals to you, inquire about the Dart 22½-foot Junior (8 passenger capacity). You have your choice of several motors for the Runabout. The Junior is powered with the Gray 6-90 as standard. Built in the shops of the Indian Lake Boat Company, Inc., East High Street, Lima, Ohio.

The DART RUNABOUT

NEW YORK	BOSTON	CHICAGO	PHILADELPHIA	MIAMI
Bruns Kimball & Co.	*Atlantic Radio & Marine Co.*	*The Motor Boat Mart*	*Bruns Kimball & Co.*	*Atlantic Boat Yard Co.*
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Diesel - Electric

Yacht

IMAGINE, if you can, handling a big high-powered yacht easier than your automobile. Think of accomplishing this with one little handle (beside the steering wheel) that instantly controls the power either ahead or astern — power so positive and so flexible that it can be applied to produce any desired speed from mere steerageway to maximum.

Picture the added luxury possible below deck, with a power plant that can be located to provide a better arrangement of space and so segregated as to minimize vibration in the living quarters.

Westinghouse Diesel-Electric drive makes all this possible and a great deal more, including increased cruising radius and reduced crew, so important in cruising yachts. Already many of America's famous yachts have been re-equipped by Westinghouse with this super-propulsion.

Write for new Diesel-Electric book just off the press.

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Sales Offices in All Principal American Cities
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Westinghouse

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A Simple Rule for Keeping Clear of Obstructions

(*Continued from page 62*)

the light bore ten (10) degrees when sighted. Therefore you must change course *away from light* ten (10) degrees to make angle on bow (20) twenty degrees.

As the navigator usually knows ahead of time just how far off he wishes to pass the lights, or navigational objects or aids, the most common problem is that of finding the change of course to be made. The navigator can therefore previously decide what the distance will most probably be. With this numeral and sixty (60), he can determine immediately what the ratio fraction is. For ten miles, the ratio is 1/6. For twelve miles, the ratio is 1/5. For fifteen miles, it is ¼.

With his ratio fraction in mind, it is extremely simple to multiply the distance you wish to pass abeam by the denominator of the fraction and you have the number of degrees (angle on the bow) that the object must bear on the bow to make that distance when abeam.

EXAMPLE. — You wish to pass five (5) miles off. For ten miles distance, this gives 6 times 5, or 30 degrees. For twelve miles distance this gives 5 times 5, or 25 degrees. For fifteen miles distance, this gives 4 times 5, or 20 degrees.

As it is very unusual that lights or tangents of islands are made ahead (most frequently they are made at some angle on the bow) it is merely necessary to observe the bearing, calculate mentally the desired angle on the bow, and by subtraction find the number of degrees through which you must change your course in order to give you the necessary angle on the bow, which will insure your being the desired distance off when abeam.

This thumb rule is not meant to displace the two bearing problem of which the "bow and beam bearing" is a special application. It is merely meant to give you an *immediate* course to reach the desired point when abeam. After having laid your new course, the accuracy of your position should be checked during the run till you are positive that tide and wind have not set you too close on shore.

If your check-up by either the two bearing and elapsed time method, or by the bow and beam method shows that your position is safe, you have the added satisfaction of knowing that you did not waste any time before getting on a safe course.

The Aerodynamics of Sails

(*Continued from page 61*)

mainsail. (Use "outriggers" for the sheets.) (Compare planes.)

2. The jib should not be arched strongly.

3. The jib should overlap the mainsail. (Compare Fig. IV.) This is possible only by the use of "sheet outriggers."

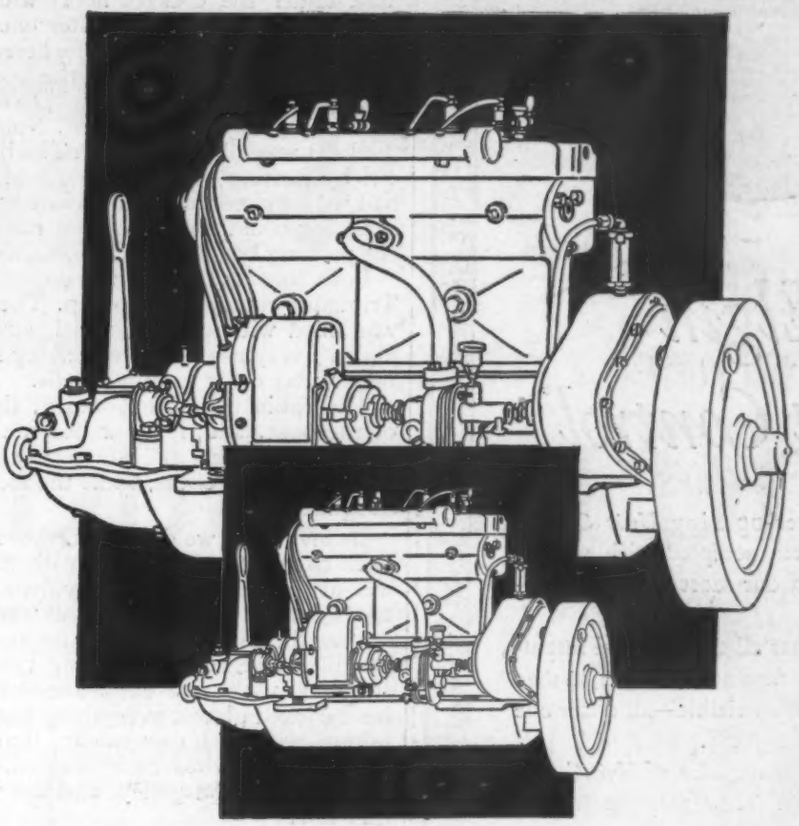
4. The jib should have as long a luff as possible so as to influence the mainsail in its entire length.

5. The distance from the foot of the mast to the tack of the jib must be short. (Compare Fig. IV and others.)

Let it, however, be said that these rules give the most favorable position of sails relative to each other for a certain measured area of sail. According to this it would naturally be of but little advantage if a skipper should set his jib back nearer to the mast without increasing its height — thus sacrificing a measured area without being able to increase the size of the mainsail. If the jib is set back, the area which is sacrificed in the measured jib triangle should be added to the mainsail.

[This is the fourth of a series of articles on the Aerodynamics of Sails and the Art of Yacht Racing, from the book of that title, shortly to be published here by Dr. Curry. — Ed.]

PALMER'S LITTLE HUSKIE



We could have made it bigger

Specifications

12–15 h.p. at 1,000 to 1,500 r.p.m.

4-cylinder, 4-cycle, 3-inch bore x 4-inch stroke

Balanced 2-inch crankshaft

Overall length: flywheel to shaft coupling, 41½ inches

Length, flywheel to end of cylinder block, 24½ inches

Length over top of cylinder head, 17¾ inches

Overall width, except magneto and pump, 14½ inches

Diameter of flywheel, 14 inches

Height above bed, 14¾ inches

Weight, complete, with built in magneto and Palmer enclosed disc clutch, 375 lbs.

Price with magneto, ignition and reverse gear, $340.00

But what was the use?

True, the engine would have weighed more, cost more and taken up more room — but it would not have delivered a bit more power. We packed Little Huskie's dependable power in small space — yet with no sacrifice of strength or durability.

Little Huskie is the ideal power plant for the auxiliary, dory, runabout or small cruiser. It is substantial, high speed, yet small and compact. It is designed, built and guaranteed by Palmer Bros.

What more can you ask in an engine?

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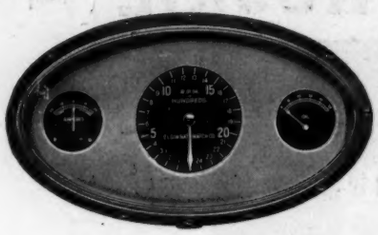


*Elgin Unit Control**

THE new, three-opening *Unit Control* Board has been accepted with greater enthusiasm than our most optimistic expectations.

Unit Control puts all the essential instruments before the man at the wheel, so that they are at all times visible—all under one glass, indirectly lighted.

Elgin conceived the idea of *Unit Control* for motor boats. They may be had in almost any finish specified. Also to contain three or five instruments for single screw, or the special *Unit Control* Board for twin screw.

The *ELGIN Chronometric Tachometer* is specified equipment on the U. S. Air Mail planes built by The Douglas Co. This exacting service is ever alert to procure a tachometer capable of meeting hard service over a long period of time.

The owner of smaller water craft is now able to have *Unit Control* on his runabout or cruiser at about the same amount each individual instrument would cost—with the added elegance and neatness of all instruments under one glass, indirectly lighted.

If you are interested in knowing your speed in miles per hour write us for "Speed Chart."

*Registered U. S. Patent Office

Tachometer Division
ELGIN NATIONAL WATCH COMPANY
35 East Wacker Drive · Chicago, Illinois

Mildred IV

(*Continued from page 55*)

for the ketch *Golden Gain*. There is a 150-gallon water tank under the cockpit floor, which solves the water problem for a great while after one filling, and, incidentally, involved us in the one fool error in the whole outfit. The inside stuffing box, on the end of the shaft log, is way back underneath this tank, so far back that it can be got at only by a contortionist. No one spotted this until the boat was all but finished. The builder helped matters out by putting on an outside packing box as well; but had we only seen it in time there was no reason why the shaft log could not have been run further forward, and the packing box rendered accessible.

Both fore and aft of the engine room bulkhead is a Trimount rotary bilge pump. The bottom of the boat was filled with cement, which strengthens her greatly; and is a very neat feature, making it possible to have the bilge water drain to pump wells.

The cabin is, without doubt, the least thrilling part of the boat. Still, it is far better than the plans would, at first glance, indicate. The floor space is wide, giving a roomy effect, while the lockers almost approach adequacy.

Believing, as we do, in four hot meals a day, we have been tremendously pleased with the galley. Being fairly well aft it gets comparatively little motion. The ice chest holds enough ice to last a full week in summer. Its top is smooth, and tin covered; further, it is sufficiently accessible to serve as a cooking table. The sink is nicely situated, with fine cupboards above and below. We have cooked almost everything that one would ever cook ashore, with such convenience that most of us who have cruised on *Mildred* have decided, when building boats, to put in a good galley, and see what is left for living quarters.

Wheelwright realized before he started that his cabin was going to be small. This is a fundamental disadvantage of any small boat that depends upon her engine to move; and, since a boat is better than a raft only in so far as it can move where you want it to go, the proper installation of the engine ought to be the first consideration, with the result that you certainly get less in the way of accommodations in a motor cruiser than you do in an auxiliary with a smaller engine. But what are you going to do with a person like Wheelwright, who prefers accurate navigation to the sport of sailing? He calmly admitted all this, and still preferred the motor boat.

And this brings me to the "auxiliary" sails. "Auxiliary" is a word in such good repute that I hesitate to use it in describing this rig. We nearly came to an *impasse* over it; I protested its inadequate area, its looks, its existence. But Jere was paying for it, and seemed to be aggressively in favor of it as it stood; so, again, there was nothing for me to do but give in. We hoisted the rig twice last summer, each time with much dissatisfaction, particularly to me. The rigging was conspicuous by its inadequacy: no proper sheets and purchases, no stops to furl it with, no travelers or other refinements; and, even when it was up, there wasn't enough area to steady her — not even to steady her, I tell you!

I looked at Wheelwright, and said, "It's your own damn fault." And after I had said it many times, I began to appreciate the fact that Wheelwright actually liked the rig as it was: he hates sails so much that it pleases him to have trouble with his rig — which serves to reassure him every time he looks at it that there is nothing in the sport of sailing.

This, however, is not the only satisfaction Wheelwright gets out of his boat. The excellence of the motor is as extreme as the uselessness of the rig. We chose a 40 horse power, four-cylinder, four-cycle Lathrop which turns

1927

They said it couldn't be done, but—

LINDBERGH DID IT

FROM the beginning of time pioneers who had the vision and courage to undertake new and bigger things have always met with scant encouragement. Only fifteen years ago, Tom Day was considered foolhardy to attempt a transatlantic trip with his little 35-foot SCRIPPS equipped cruiser "DETROIT."

And last month an intrepid young man hopped over the same distance in hours where days had been consumed before.

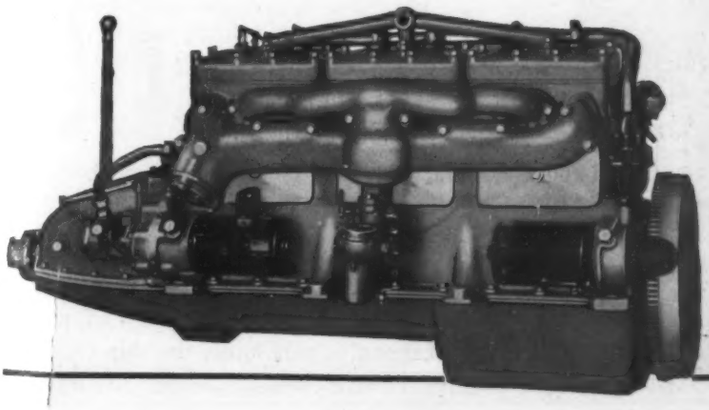
What will the next fifteen years develop in safe, rapid, transportation?

All credit to the pioneers who are opening new fields of achievement and laying the groundwork for better boats, better cars, better planes, and BETTER MOTORS.

1912

Scripps

Model F-6 Scripps, 100 h.p. One of a fine line of motors from 10 to 150 h.p.



SCRIPPS MOTOR CO.
5833 Lincoln Avenue
Detroit, Michigan

The Lone Star—designed and built for MR. GEORGE GALT BOURNE

Background

BEHIND the leadership of Consolidated there is an ever-increasing group of Yachtsmen who pronounce the superiority of Consolidated built boats.

Details of any size or type of boat will be gladly furnished on request—yacht tenders, day cruisers, commuters, yachts.

Correspondence Invited

Consolidated Shipbuilding Corp.
MORRIS HEIGHTS NEW YORK

700 r.p.m., according to the catalog. Our preference for this brand is based on our own experience with Lathrop two-cycle motors (which have not yet been excelled for use in open boats), and upon George Farnsworth's complete satisfaction with the four-cycle Lathrop he used in *Rusugeo*. *Mildred's* motor is equipped with self-starter and generator. It self-starts with the precision one associates with the starting of the very finest automobiles. The generator is adequate, I should judge, because the storage battery shows no tendency to run down. This, I believe, is unusual in marine electric equipment. Once started, the engine runs until you turn off the switch. I am willing to take the longest chances on its reliability. Unfortunately, we have no figures on gas consumption, either of this motor, or of the higher speed machines we previously used in the earlier *Mildreds*. With such large tanks, it was Wheelwright's habit to pour the stuff into her every now and then, and let it go at that. From my standpoint, the boat seemed to use a lot of gas; but I am scarcely qualified to judge, because I use barely 30 gallons a season in my auxiliary sloop.

The propeller used was 26 inches in diameter, by 22 inches pitch. Over the Rockland measured mile against wind and tide, the boat logged 8.09 nautical miles per hour. This test, if it can be called a test, was made two weeks after she went overboard for the first time. Now that the engine has loosened up, Jere judges that she can go 9.5 knots at full throttle. I am inclined to accept this as accurate.

From the very first, *Mildred IV* has been a great satisfaction. Messrs. Goudy and Stevens, of East Boothbay, did an excellent job in putting her heavy timbers together. They *are* heavy, too — about what Alden specifies for his 43-foot *Malabars*, I think. What is more, the boat was delivered two days before the contract date, in spite of various delays in getting the plans out.

In the rough water for which she was designed, *Mildred* excels any launch I have seen in dryness, in easy motion, in safety. With her exorbitantly full power, she shows no tendency to slow up for anything, no matter how hard it blows. She practically steers herself; and it has at no time been necessary to give her more than a spoke or two in order to hold an almost perfect course, even in fairly rough weather. I feel confident that she is up to getting us out of any dusting into which we may blunder.

In regard to Mr. Alden's work on the plans, the most significant item was his marked capacity to "grasp the idea." I think "marked capacity" the very phrase in this connection. It is an unusual achievement to take a body of confused suggestions and demands, and, with such a basis, to turn out plans for a boat that fills the bill with almost complete efficiency.

Whatever faults the boat may have, I have listed to the best of my ability. These were foreseen before construction commenced. I am prepared to take oath that she has no others; and I feel that she is preëminently the most satisfactory power boat I have ever used.

The Sea Anchor

(*Continued from page 65*)

Though once the subject of much argument, the beneficial effect of oil on a breaking sea is now almost universally admitted.

Those who, like the writer, have used oil when running heavily in small craft, or in the crossing of breaking bars, will always be provided with a supply for emergencies. The best oil for the purpose is undoubtedly fish oil, but if, as it has a habit of doing, it gets loose, the ship becomes unlivable. Raw linseed oil is nearly as efficient and is the

Just what you need for a Swim

HERE is the neatest, most convenient swim accessory that ever filled a long-felt need. Many a time you and your guests have had to forego the pleasure of a refreshing swim because of the bumps and bruises that result from the struggle to get back on deck. Now you can break out the Wilcox Swimming Ladder and you're all set to go. No more barked shins or discomforts — climb aboard easily and safely.

Hook it on anywhere — may be used at docks or floats. The rubber covered eyes prevent marring of paint or varnish. A pipe put down through the eyes will make the ladder rigid if desired.

Stock length five feet, containing four rungs. Sturdy, strong, stows away in a corner of the locker. Chain and rungs heavily galvanized. Make sure you get yours by ordering now.

Any hardware dealer can supply you with the ladder, or write us for address of the Wilcox dealer.

DETAIL OF LADDER

Joint strongly made by riveting eye through rung. Chain link securely held by eye. Rubber covering on eye prevents marring the paint or varnish. Extra rungs easily added.

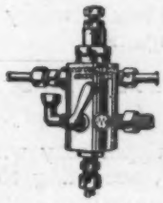
WILCOX

Dependable

Swimming Ladder

Autochime Whistle

Fig. 5381. Polished brass. Powerful, sweet-toned whistle tuned to harmonic scale. Patented cup gives far reaching signal.



Burned Gas Compressor

Model O-C. For charging whistle tanks. Polished brass. Pat. 3-way valve a feature.

Wilcox Compass

Dial floats in clear, colorless liquid. Expertly made. Dependable, accurate and weather resisting. Mahogany boxed. Fig. 855. Five sizes.

Send for "Sea Craft Suggestions and Supplies"

A book every boat owner should have. 294 pages of helpful facts. Covers steering gear, ground tackle for mooring or cruising, correct use of flags, how to box the compass, knots, splices, etc. Illustrates, describes uses of Wilcox line. Sent only on receipt of 50 cents.

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Weight, 110 lbs.

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Port Chester, N.Y.

oil which, for several years, has been used by the writer in crossing when breaking the Sumner Bar (the "Sumno" Bar of Captain Voss).

As to the method of use, when running, if an extra hand on deck is available, the ordinary engineer's oil feeder, from which a small stream can be poured when a breaking sea rolls up astern, answers well, but when single-, or short-handed, the oil bag must be resorted to.

The ordinary oil bag — canvas filled with waste or oakum, pricked with a sail needle — is a messy and erratic concern, the discharge varying greatly. The bag shown in the sketch is more satisfactory. It was given to the writer by the late Captain Dé Crespingey, R.N., who had used it when running the surf on the west coast of Africa.

This bag is made of cotton canvas, in one piece, folded around the brass casting at the bottom, which is sewn and whipped in place, and then sewn up the sides to form bottle and neck. The casting is bored longitudinally and tapped at the ends. It has three taps upon it through which one-eighth-inch holes are bored diametrically across the main longitudinal hole. A turned and screwed spindle with a milled head slips in the longitudinal hole. This spindle is so recessed that on turning the milled head (MH) first No. 1 passage will be partially and then wholly opened. On turning being continued, No. 2 passage is opened, and then No. 3.

For ordinary work, either running or hove to, one passage, slightly opened, is ample. For passing through a heavy tide rip, two openings are desirable, whilst for running a breaking bar or beaching a boat through a heavy surf, all three openings should be in use.

The bag is economical in oil. It may be made in any size. That shown in the sketch will, under ordinary conditions, run from two to three hours. Two bags should be provided. It will be noted that all passages are "straight through" and can be readily cleaned.

Undine, an Early Bermuda Racer

(*Continued from 63*)

to Mr. Marsters, a plumb line dropped from the masthead would drop through the rudder port, though the pictures, taken at a later date, do not show this. Her sail area is not given, but the statement is made that one racing suit of No. 6 canvas lasted 22 years. Think of that, you racing sharks! They were treated to a solution of unslacked lime, well strained, with a little alum added.

Undine was raced every year from 1882 to 1896 and was very successful, winning, it is said, three-fourths of her races. Against her were the *Psyche*, owned by Wheatley Jones, which beat her in 1892, the *Nameless*, *Nautilus*, *Julia* and *Star*. Henry Marsters first sailed on her as a member of the crew in 1882, and as skipper from 1887. Although 119 years old, she is still sound enough to repair and be put under sail again, though her racing days are over forever. They certainly built well in the days when she was put together.

The Staying of Marconi Masts

(*Continued from page 48*)

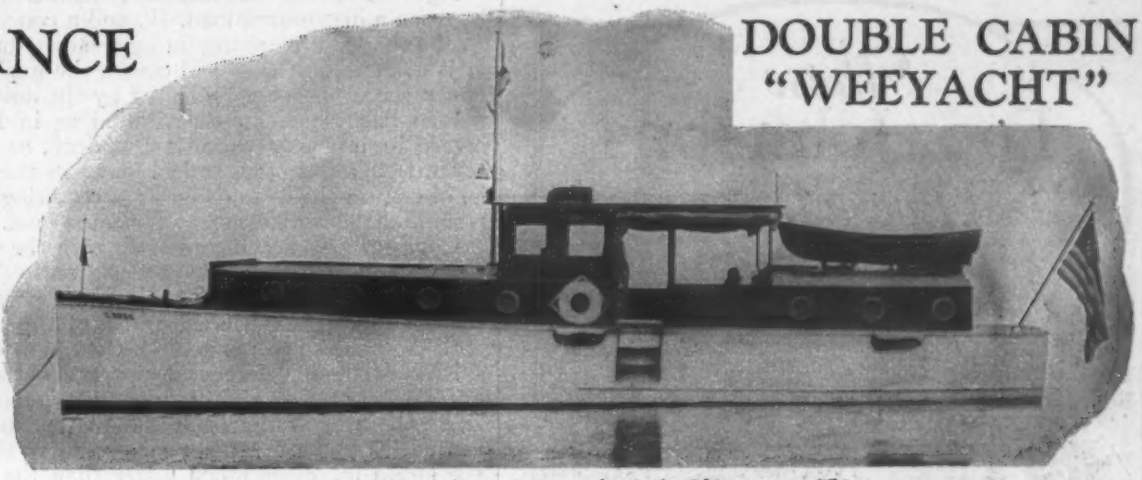
strain in the upper stay will be much heavier than in the lower one, according to the formula above, if the two loads are anywhere equal in weight. In practice the upper stays are always much thinner than the lower ones, hence the loads are never equal. This refers, of course, to concentrated loads.

Except in a squaresail or staysail, the load is never concentrated on a mast, and just here is where the trouble really begins. For if the load is not concentrated, it must be distributed. But how is it distributed? This is the first question that must be settled before we can find the most suitable way to stay a mast.

CHANCE

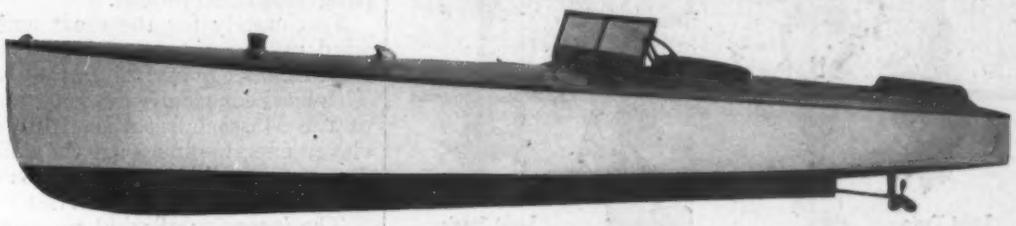
DOUBLE CABIN "WEEYACHT"

This example of WEE-YACHT is the same hull as the Single Cabin Cruiser. It sleeps four forward and three aft. Each cabin has separate lavatory. Engine room is under bridge.



Completely equipped and powered to suit you and priced within reason. This fine sea-going Cruiser requires no paid hand and will please the entire family.

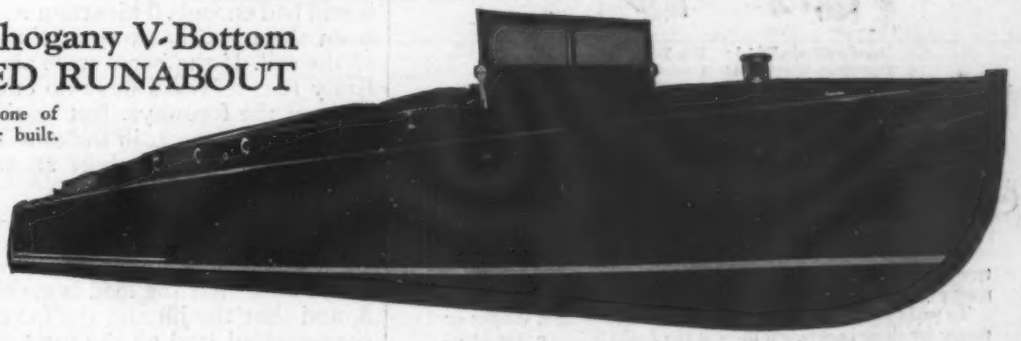
This 26-foot, SEMI V-Bottom Runabout has 5′ 8″ beam and draws 1′ 8″. No better boat of her type has been designed. Choice of power plants and a price that will be a revelation to you.

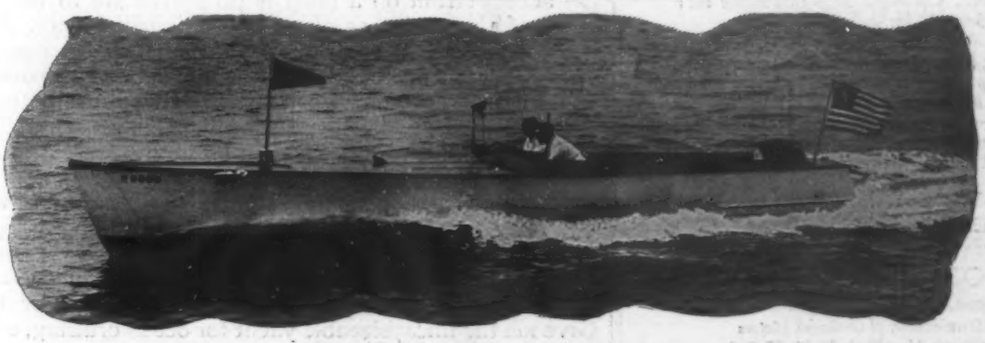


SEMI V-BOTTOM RUNABOUT

26 ft. All Mahogany V-Bottom HIGH SPEED RUNABOUT

This is without doubt one of the finest runabouts ever built. Every effort was made to build a staunch boat that will deliver years of pleasure without continuous overhaul of the hull. Beam is 6′ 6″, draft is 2′ and speed is only limited by your choice of motor. While no attempt was made to build the cheapest boat—our manufacturing methods and modern plant have resulted in our being able to deliver this boat at a much lower price than such an excellent job would seem to demand.





The Famous Chance TOMBOY has made hundreds of friends. It is 32′ long, 6′ beam, draft is 25″ and the 14′ Cockpit accommodates 10 persons. Built of the best materials obtainable, fully equipped and priced on a basis of quantity production. Speed up to 38 m.p.h.

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CHANCE MARINE CONSTRUCTION COMPANY

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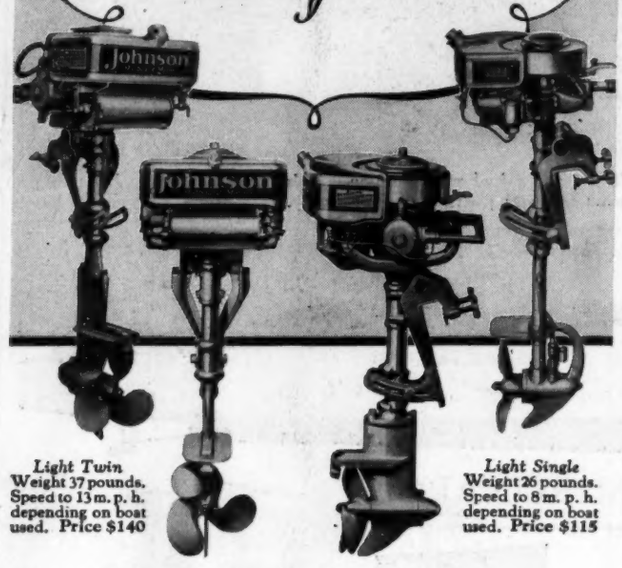
These Four Johnsons Meet Every Power and Price Demand



Light Twin Weight 37 pounds. Speed to 13 m. p. h. depending on boat used. Price $140

Light Single Weight 26 pounds. Speed to 8 m. p. h. depending on boat used. Price $115

Standard Twin. Weight 55 pounds. Speed to 22 m. p. h. depending on boat used. Price $165

Big Twin. Weight 85 pounds. Speed to 29 m. p. h. depending on boat used. Price $210

JUST as no single type of automobile can suffice for every purpose of speed, power or style—likewise no one model of outboard motor can serve every boating requirement.

In the four distinct models of Johnson Motors there is a definite type for every speed, power or weight requirement—a model to meet every boating need.

To yacht and cruiser owners who rely upon a light dinghy or tender for shore boat power there is the *Light Single* or the *Light Twin*; for larger craft where greater speed and power is desired the *Standard Twin* is chosen.

For racing fans and speed boat enthusiasts there is the *Big Twin* for use on planing type of craft. On April 24th this motor set a world's speed record of 29:26 m.p.h. for outboard motors.

Johnson Motors are the easiest to maneuver, with a greater range of direction in steering because of an exclusive feature—Full Pivot Steering; you can keep your course against a head wind or a wind on the quarter with a Johnson.

The compact simplicity—the easy start—easy operation and wonderful maneuverability of Johnson Motors, is the reason for their popularity among yacht and cruiser owners everywhere.

Sold by marine supply, hardware and sport goods dealers. Any dealer will let you take one for trial.

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The World's Largest Manufacturer of Outboard Motors
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Johnson Outboard Motors

Figure 3 shows the accepted manner to distinguish between a distributed load, *W*, and a concentrated load, *P*, the shaded area representing the distributed load, *W*. It is evident that this load causes the mast to bend between the supports as indicated by the dotted line. Now a load can be evenly distributed as in Fig. 3, or increase in intensity towards the deck, as in Fig. 4, or towards the mast top, as in Fig. 5. Of the three, Fig. 5 is, of course, the most dangerous, requiring the strongest mast and the heaviest stays for equal load.

Consider a triangular mainsail with the wind pressure fairly evenly distributed over the entire surface. It is clear that its effect on the mast would be somewhat like that of Fig. 4, because the width of the sail grows less and less as the peak is neared. On the other hand, consider that the sail is actually spread between the mast and the boom, and that the distances between mast and boom increase as the peak and the end of the boom is neared. In this case, the catenary theory teaches us that the strain increases much faster than the distances between the supports. In other words, the effect of the sail on the mast would be the same as in Fig. 5, a most dangerous effect indeed.

Fortunately for the mast and the yacht herself, the wind pressure is never evenly distributed over the sail but decreases in intensity as the leech of the sail is neared. This has been clearly demonstrated by Professor Warner, at the Massachusetts Institute of Technology, in some clever experiments with the sails of the Class S yacht *Papoose*, and by the experiments of Dr. Curry, as told in the May issue of YACHTING.

The intensity of wind pressure per square foot is less than half as great at the leech as at the luff of the sail, hence the effect on the mast is not as bad as in Fig. 5, but is still bad enough. This strain results, of course, from the main sheet and is always acting along the actual curve of the sail. If the boom were amidship and the sail perfectly flat, it would have no effect on the shrouds, but only on the forestays. But as the mainsail is never flat and the boom never in the center line of the hull, clearly a part of the main sheet strain is transferred to the shrouds.

Reasoning thus, it becomes clear that the actual effect of the sail on the mast is somewhat a combination of Figs. 4 and 5. In other words, we may assume without much error that the load is evenly distributed as in Fig. 3, and that the jib and the forestay constitute a special concentrated load on the mast, as at *P*. In this manner the problem is made easier of solution.

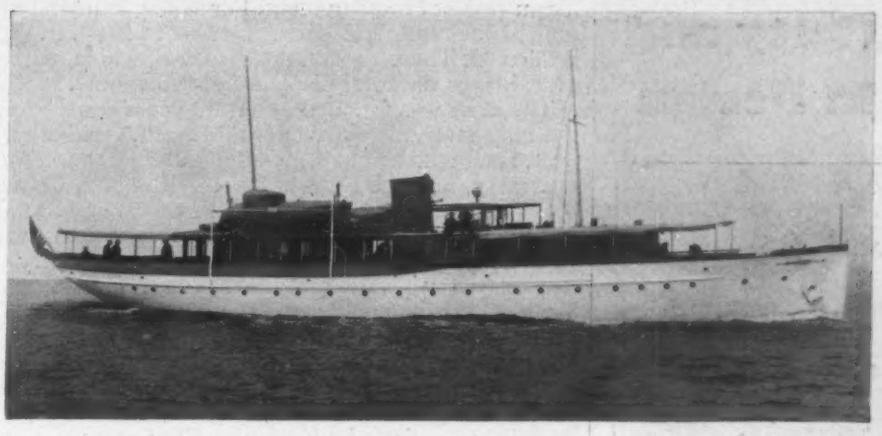
Before proceeding further it might be made clear that the actual strain on a mast is proportionate to the stability of the yacht, as already mentioned. Hence, if we lower the lead keel or increase its weight, we increase the strain on the mast and the rigging in the same proportion, which means, of course, that the rigging must be made stronger and heavier. A heavy lead keel, or great stability, is thus not an unmixed blessing by any means. And this is the reason why lightly ballasted yachts or boats, like *Alice* for instance, can stand up under sail as well as they do. They have little stability but their rigging is light, or can be made light in weight, which helps them out. Still, such yachts cannot be called ocean going even if they can, by smart handling, survive a gale or two. Give me the uncapsizeable yacht for ocean cruising, every time.

(To be concluded)

British Racing Notes

(Continued from page 42)

giving a positive surplus buoyancy of at least 50 pounds. This regulation was very wisely insisted upon by the Council of the Yacht Racing Association when the 14-footers were made a National Class. No spar may be



"RENE." Alfred P. Sloane, owner. Designed by John H. Wells. Built by Consolidated Shipbuilding Corporation. Length overall, 118 ft., 7 in. Length waterline, 110 ft. Beam, 21 ft., 5 in. Draft, 7 ft. Powered with two Model 111 Winton-Diesel Engines, total 400 h.p.

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PREFERRED REFRIGERATION

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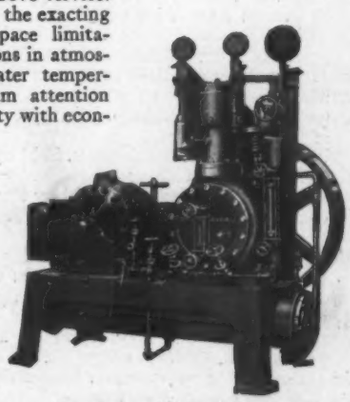
THE Brunswick Self-Contained Refrigerating and Ice Making Units are especially adapted for the above service. These Units meet the exacting requirements of space limitations, of fluctuations in atmospheric and sea-water temperatures, of minimum attention and of dependability with economy.



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The Brunswick Self-Contained Unit—Built in five sizes

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When the deck or spars are gouged—when bolts or screws are moved—wherever a weatherproof, waterproof filling is required—use Plastic Wood. It has all the properties of wood except the grain, but will not chip or splinter.

From the can it handles like putty, but on exposure hardens quickly into wood. It has the adhesiveness of glue to metal, wood or fabric, will not disintegrate like putty, and takes stain, paint, varnish or lacquer perfectly. Recommended for stem, stern and garboard joints and for setting stuffing boxes.

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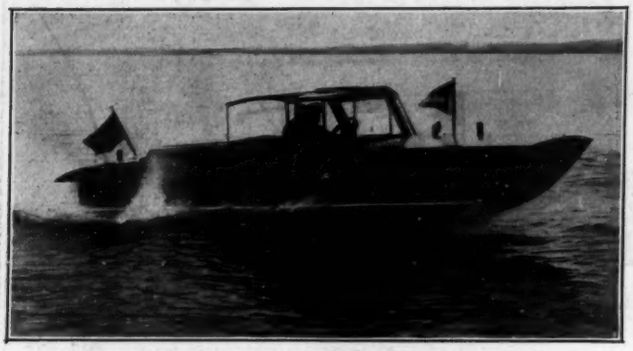
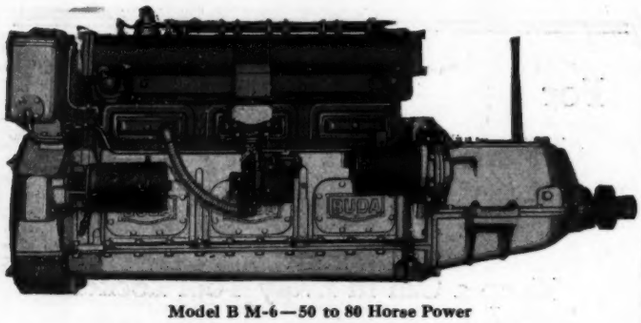


Buda seventy-five horse power engines are used as standard equipment on the Model 23 Sea Sled

THE extreme simplicity of Buda design, the employment of only tried and proven engineering principles, and the complete absence of freakish ideas and experiments are winning more and more boat builders to standardize on Buda power. Owners, too, recognize these Buda features and are re-powering their boats with Buda marine engines, because simplicity means greater practicability and longer service.



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HARVEY (Chicago Suburb) ILLINOIS

BUDA POWER

longer than 15 ft. 6 in. and the sail area must not exceed 125 sq. ft., 85 per cent only of the fore triangle being taken for purposes of measurement. For sailing in inland waters, such as the Norfolk Broads, an area of 140 sq. ft. (actual) is allowed. The crew is limited to two, which, with loose gear, brings the total displacement to about 750 lbs.

The class was founded about 30 years ago and at first the only restriction was over all length. Gradually, however, such restrictions were adopted as were found to be necessary, and the famous West of England Conference dinghy was evolved. When the Great War came to an end the Yacht Racing Association — in response to an appeal from boating men in various parts of the country — undertook to legislate for the smallest classes and the W. E. C. 14-footers became the National 14-foot Class.

One can well understand that the National 14-footer should have taken such a strong hold on the popular imagination, as she represents the high-water mark in small racing craft. She is, in fact, what Commander Martin, of *Jolie Brise* fame, describes as an out-and-out thoroughbred. In describing the characteristics of the class recently, Commander Martin, who, by the way, has had a long practical experience of the type, said: "These boats are different from any other Y. R. A. class which races in open waters — they will hydroplane when running before a strong breeze and a following sea. Moreover, they will sometimes start rolling with astonishing rapidity under the same circumstances. The combined result is a blend of joy and anxiety, which affords the helmsman a thrill which is beyond description." These little boats can, however, be sailed successfully in exceedingly rough water, and it has been said that where the six-meter boat can sail the National 14-footer can! As a matter of fact, these little craft have often been raced hard when much bigger racing craft have remained at their moorings.

Recent Yacht Sales

Astrild, Class R sloop. Sold by H. W. Hanan to Carll Tucker, of New York City.

Sunflower, 70′ power cruiser. Sold by estate of John P. Crozer to Erwin M. Jennings, of Bridgeport, Conn.

Vagabondia, 133′ power yacht. Sold by W. L. Mellon to John Vanneck, of New York City.

Winchester, 225′ power yacht. Sold by Peter W. Rouss to Vincent Astor.

Windward, 25′ auxiliary yawl. Sold by Charles Reuteman to George A. Crocker, of New York City.

Doress, Class R sloop. Sold by Robert Law, Jr., to C. L. Farrand, of Long Island City.

Suzanne II, 56′ power cruiser. Sold by Cornelius Hearn to J. S. Keegan, of New York City.

Chin Chin, 42′ power cruiser. Sold by George P. Granbery to Nicholas Brown, of New York City.

Merdonia, 92′ power cruiser. Sold by Fred C. Merry to James H. Rand, of North Tonawanda, N. Y.

Perneb, Class S sloop. Sold to Robert E. Peabody, of Jamaica Plains, Mass.

Question, 6-meter class sloop. Sold by Gerald Ford to C. W. Johnson, of Chicago.

Tecumseh, 40′ auxiliary schooner. Sold by George S. Tiffany to Julian Armstrong, of Chicago.

Aphrodite, 260′ power yacht. Sold by Payne Whitney to A. K. Ringa, of New York City; to be taken to Athens, Greece, for commercial service.

Bally Hoo, 6-meter class sloop. Sold by Leonard M. and Richard H. Hanan to Nathaniel S. Corwin, of New York City.

Maid Marion, 79′ power cruiser. Sold by C. C. Winningham to G. A. Green, of Detroit.

Nancy Earle, 42′ auxiliary schooner. Sold by Josiah M. Lasell to Howard M. Grant, of Detroit.

Alexandrea, 48′ power cruiser (formerly *Riette*). Sold by Estate of Alexander G. Rea to Horace A. Doan, of Toms River, N. J.

Vidor, 163′ power yacht. Sold by Victor Emanuel to W. C. Durant.

Bilma III, 66′ power cruiser. Sold by W. G. Selby to Edward E. Bishop, of Bradentown, Florida, and renamed *Querida*.

Cachalot, 54′ auxiliary schooner. Sold by D. M. Collins to Theodore E. Ferris, of 30 Church St., New York City.

Chances, 27′ sloop. Sold by the Indian Harbor Syndicate to Dr. Edwin C. Streeter, of Boston.

Owera, 164′ power schooner. Sold by Estate of James Shewan to George W. C. Drexel and renamed *Alcedo*.

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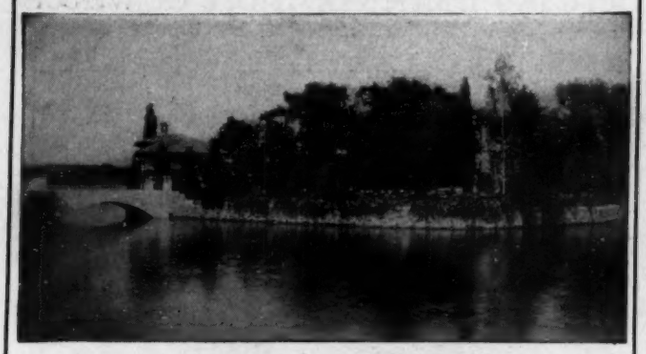

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Tidal Wave

(*Continued from page 70*)

cruising boats, *Tidal Wave* is undeniably smooth. I am not borrowing this word from the slang school, but am using it as defined by Webster: "evenly spread, sleek, without bumps, gently flowing, or with perfect blending of the elements." Having said that I'm sure I've said more than enough, and hope I shall not be judged too harshly.

Departing from my reactions, an examination of the new lines, pushed together, deepened and extruded from the old, as they are, shows she still is "all ends" as far as the water lines are concerned, while by way of diagonals and buttocks her "parallel body" is even more apparent. Perhaps you have noticed that the operations she has been subjected to have brought her to the door of the Block Islanders. A furtherance of such operations would bring her right up beside the *Lena M.* But that isn't strange; she was built in the Block Islanders' back yard, but during their declining years. Like her prototype, she will probably be a very dry boat, and a good performer to windward, which after all is the true test. A nasty chop should affect her but little. Figures indicate a stiff boat.

The sections of this deduced boat are an atavistic departure from the usual run of sections of today. They are, however, not greatly unlike those on a class of three 25 ft. w.l. boats brought out by Herreshoff in 1914. George Granbery owned one, cruised and raced in her with great success, and parted with her to his everlasting regret. Mr. Granbery wants her back, and claims that of all the many boats he has owned and sailed he never saw her equal in dryness and general all-around performance.

Tidal Wave carries 654 sq. ft. of canvas in her lowers. The jib topsail will add another hundred feet or so when needed. A trick sprit topsail such as Munroe devised for the *Micco* is under contemplation. The area is moderate indeed for a displacement of 20,600 lbs., each square foot being required to push 32 lbs. of boat. It would be difficult to reduce the displacement even if we wanted to, and it's equally difficult to increase the areas of the lowers. Past experience and recent experiments prove the jib-headed ketch a very efficient rig, and besides, practically the same area, displacement and type of rig were used in the *Eaglet*, and she is a fast boat, particularly to windward.

With such short ends the mainmast appears to be well into the eyes of the boat; but the stepping of masts must not be considered in relation to the length on deck, but to the l.w.l. So considered, its position follows good practice. These same short ends accentuate the heights of the spars. The mainmast, from l.w.l. to withe, is about 45 feet long. This is 1.45 of the l.w.l. length. Compare this to twice the l.w.l., the limit placed on racing craft under the International Rule, where one spar, puny in comparison, carries everything, with mighty few dismastings in spite of hard driving. Real sticks will go into *Tidal Wave*, and they shall not be shrouded with piano wire. A permanent backstay will run from mainmast head to as low a point as possible on the mizzen.

The mast tracks will be of maple, and the old fashioned slides with rollers will be used; I have never heard of a single instance of this type of slide jamming. They have been used for years on commercial Narragansett Bay cats where, moreover, the gaff jaws ride the wood track.

Enough of the hull construction is shown on the arrangement plans and sections to forego the necessity of much discussion. Needless to say the construction is sturdy. I believe in the discriminate use of substantial timbers — a safe boat and one equal to that 100th time out. The *West Island* is some 30 years old, going as strong as ever, yet actually lightly built and loaded with inside ballast! But it may be noticed the keel of the *Tidal Wave* is one long, straight stick of oak. There is no piling of deadwood on deadwood; one large stern knee does the whole job, and does it better than anything else can. It

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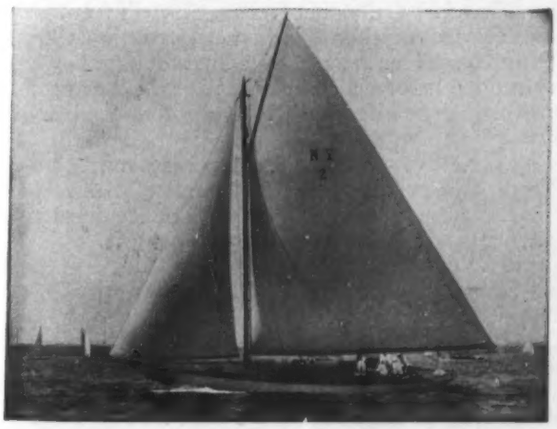

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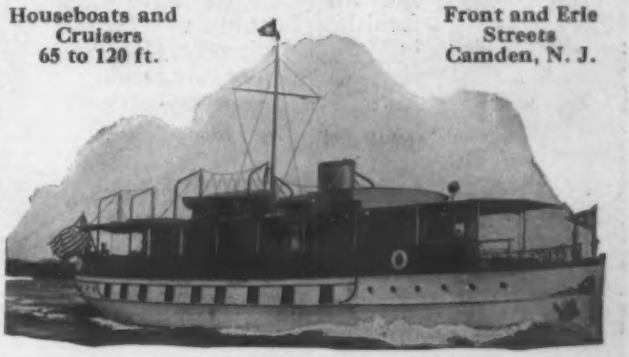

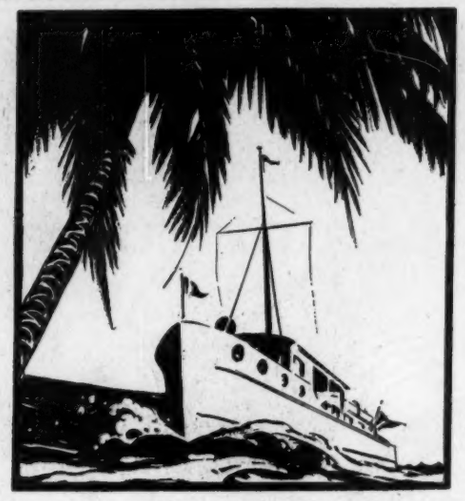

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requires a large knee, but such are available. If not, then the sternpost will be spliced into the knee just as the stem is spliced to the stemson or gripe. This construction permits small opportunity for leaks.

I prefer specifying a special stuffing box to fit the knee as shown, rather than applying a block to the knee to accommodate an ordinary box. The block is too apt to check badly. A brass pipe is threaded into both the stuffing box and stern bearing, keeping water from inside the knee. I have used this construction before and know where there is a pattern for the box.

The iron keel will weigh 4,500 lbs., with about 500 lbs. trimming ballast inside. The top of the keel is a straight line, and it will be quite long for economy in fitting, for strength of hull, for weight distribution, and by choice. The frames have but the easiest of bends. The builder, I venture, will find this boat a delight.

The accommodations available were somewhat surprising. The lines seemed so fine forward and aft I had my doubts as to the possibilities. I was afraid I could not conveniently locate the coal stove athwartships as demanded. However, with her generous beam and a house 14′ long the interior resembles an acre lot, especially when one remembers her overall length is but 32′ 4½″.

For a four-bunk layout quarter bunks were favored, provided they would be real bunks and not glorified lockers. The plans show these bunks to be over 36″ wide at the head and 18″ wide at the feet. Below are useful lockers. Two arrangements of stepping the mizzen are shown. I prefer to have the thwart carried on substantial stanchions secured to deck beams and extended floors. However, this allows but 30″ of length for precipitating one's self into the bunks. An alternate method, whereby an inverted tabernacle is used, permits of easy access to the bunks, both for turning to and making-up.

The motor is brought forward to a convenient position. It could be pushed much farther aft if desired, in which case there would be increased stowage space.

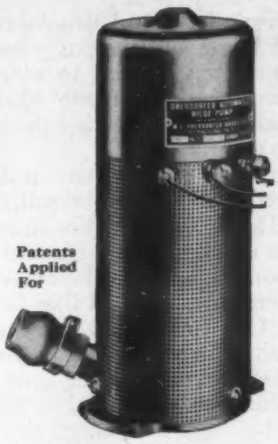
Just forward of the quarter berths are bureaus to port and starboard, with long drawers and lockers, and provided with alcoves under the side decks. The center of the house finds two generous transoms, each 31″ wide. Water tanks will be placed under the transoms. Forward, to port, is a wardrobe with bureau top, while to starboard is an enclosed toilet. The cabin trunk extends well over the toilet. The forward toilet bulkhead will probably be moved forward another 6″ when construction starts.

We find ourselves in a rather commodious galley having, as mentioned before, a coal stove placed athwartships set at the proper height of 30″. Under the stove is a fuel bunker for the briquets — it may be made larger by removing the stove legs. The dresser top is ample but none too large. By keeping the upper course of dish racks only the dresser area will become large. The ice chest to starboard has a dresser top to supplement it. Shelving is found in abundance. The stove pipe is "dog-legged" outboard to keep the Charlie Noble away from mast eddies and smoke away from sails.

The fo'c's'le has 4′ 5″ headroom under the after hatch beam! This, like the unusual room for accommodating the motor, is due to the deep sections. I have cruised in good boats as long as the *Tidal Wave* that had no more headroom in the cabin proper.

The cabin floor is full 36″ wide throughout the cabin, which is unusual. The headroom under carlins is 6′ 0″, reduced to 5′ 9″ at the galley. There are no bulkheads to interfere with the freedom of the cabin, and bureaus and lockers are below the eye level.

In conclusion, it would appear that where one limits his desires by overall length, and at the same time wants all he can get in the way of beam and accommodations, at the same time keeping waterline proportions within a decent figure, he will do well to study this type of boat.



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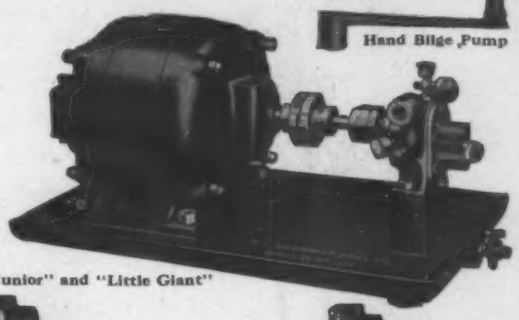

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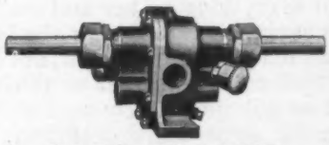

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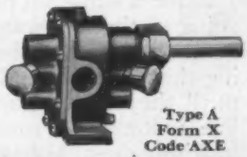

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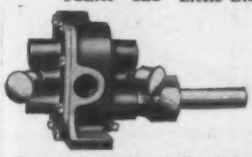

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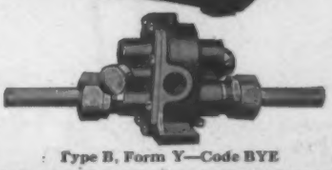

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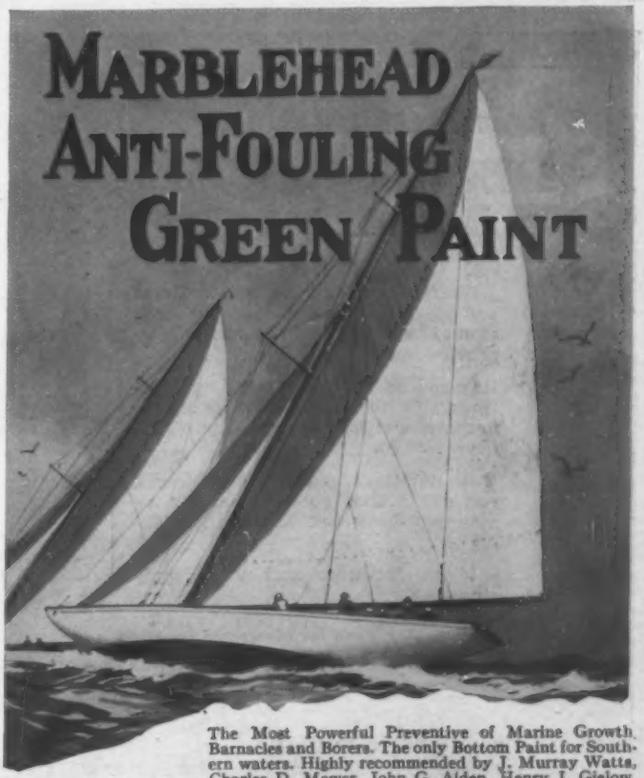

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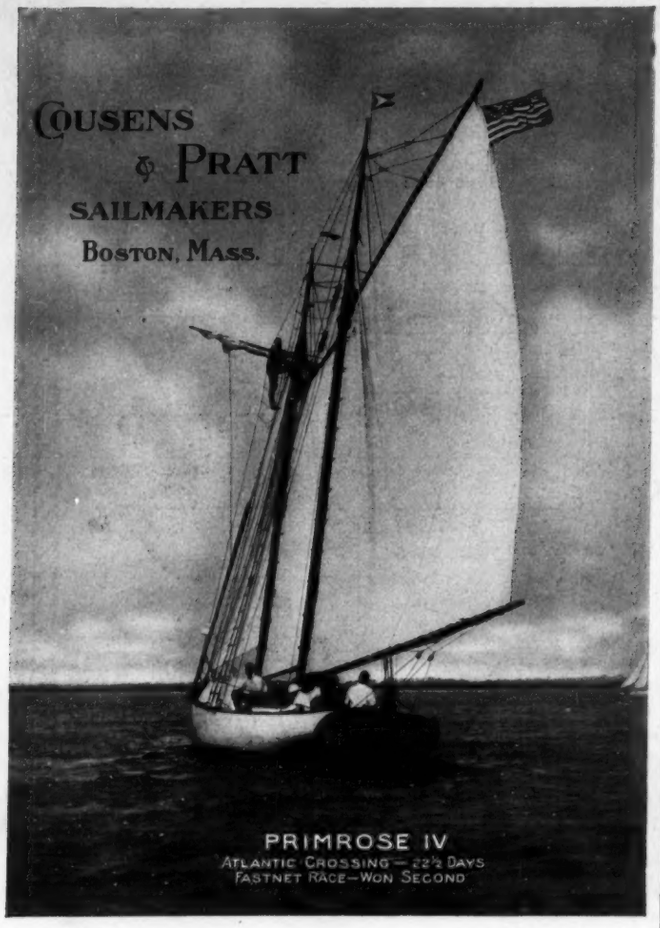

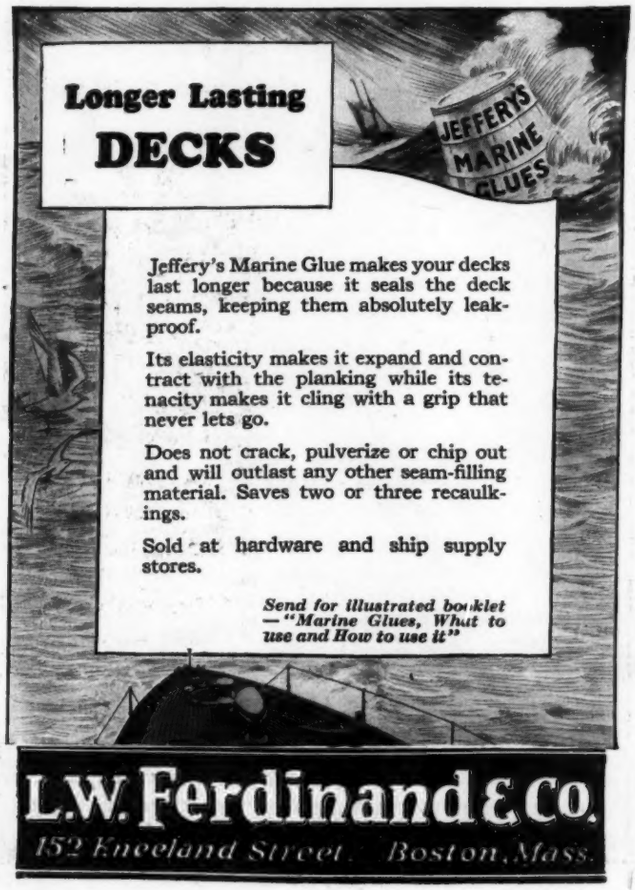
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Out of the Fog Come the Ten-Meters

(*Continued from page 58*)

this is a nice little party, isn't it?" And Brooks replied, that "he wished he was to home and the party to hell." The three boats spent all next day beating to windward, and the second night two of them made Shelburne Harbor for a night's rest, while *Valencia* tried the virtues of Lockport, a little to the eastward.

Meanwhile, with the coming of dawn, we on *Esquila* got going again under reefed mainsail and staysail, having jogged along under staysail alone for about six hours, part of the time heading to the eastward. The ten-meter sail plan would indicate that something could be expected of the boats under staysail alone, but I should like to go on record now as a Cruising Club man (and, by the way, there were four other Cruising Club members in the fleet) and say that they handled beautifully for long-ended boats in a big lump of a sea. Not only did they foot well about seven points from the wind with eased sheet, but tacked ship as nicely as could be desired. I don't think the boats would have had much trouble keeping off a lee shore under staysail alone in much heavier weather.

After a while we put everything on her and really got going to the westward again, anchoring near the light in Shelburne Harbor about ten o'clock that night, not knowing that *Twilight* and *Cythera* were further up the harbor until they towed past us going out early next morning. We motored to town for some spare gear and, while looking over Harry Raymond's new schooner, met Livingston Davis, who had to leave *Cythera* for Boston, and who gave us the news of the towing incident, and very kindly sent off telegrams for all hands. Again we got to the line six hours late, with everybody out of sight ahead; but with the light airs beat close along shore all day, working the tide eddies, and took our departure from Cape Sable light about seven o'clock, with the early flood tide and an increasing wind gradually hauling to north-northwest, laying our course and going grand.

What a sail! Every star and constellation shining in the heavens, a smashing breeze, the Northern Lights playing brilliantly, and finally a late moon. We did 8.6 knots by the log in the hour from six bells to midnight, and made a fine run of it to Cash's Ledge about noon next day, where the wind gradually died and backed through west to southwest. We picked up *Twilight* and *Cythera* abeam about twelve miles distant, shortly before noon, and with the shifting wind closed up during the night, reaching Marblehead in the growing light of dawn to find *Branta* the first boat in with her crew still on deck furling sail. Clifford Mallory let go an anchor twenty minutes later, and Commodore Stewart followed suit about the same time behind him, four boats home within two hours, and less than four days from Halifax.

Sails furled and dinghy launched, we immediately went avisiting to greet the young day, and spliced the main brace aboard *Branta*. A pleasant and restful day was spent at the Corinthian Yacht Club, and while all hands were lunching ashore, *Valencia* arrived in a smashing southwester that blew up during the morning. The rest of the afternoon and evening was largely spent worrying with Frank Page over the absence of *Narcissus*, but she appeared early next morning, having made port in Nova Scotia and again in Rockport, so poor Frank was saved for the bids and offers after all. With the exception of *Valencia* and *Narcissus*, we got under way early in a light northeaster, but this died off Boston Light and the able *Bonnie Dundee*, towing "Cliff" Mallory, picked us up and gave us a tow through the canal, Commodore Stewart's tender doing the same for *Branta*.

We all towed to New Bedford and had a fine run next day with a hard easterly right astern which left *Branta* in Stonington, *Twilight* and *Cythera* in New London and blew *Esquila* all the way to Duck Island Roads. This was

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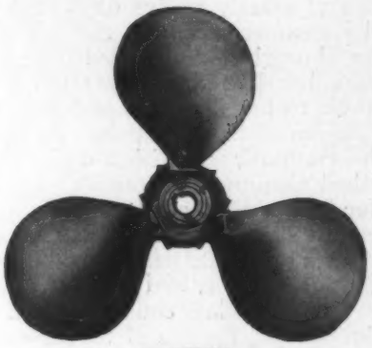

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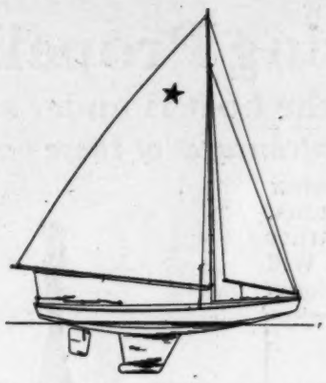

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A most complete model construction set of the famous international star class. Built on the scale of 1¼" to the foot. The set consists of all wooden parts shaped, lead keel, all screws and brads, sail material, spars, small plane, sand paper, rigging cord and deck fittings. A very complete set of instructions for assembly are also furnished. Send for literature on this construction set.

Our complete catalog of model boats, engines, boiler and fittings sent postpaid upon receipt of 25c.

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WE are pleased to announce that we have just received a contract to build twenty-five 30-foot cruisers. Plans and specifications will be published later. This contract was given to us in the face of keen competition and is a tribute to our ability to build in accordance with the highest traditions of the craft.

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NO JOB IS TOO LARGE AND SATISFACTION IS GUARANTEED

New Haven Marine Construction Co.
West Haven, Connecticut

a hard day's sail, a tremendous quartering sea rolling the boats twenty-five to thirty degrees, and making steering a hard and nerve-racking job. We took the headsails in entirely and put a boom-tackle on the main boom, ran it forward and bowsed it hard down, opposite the lee shrouds.

Next morning it was still easterly with fog, so much so that the run to Greenwich was a buoy-to-buoy affair; but arrive we did, at seven o'clock that evening, first boat to make her home port, and exactly twelve days after we had left New York by steamer. *Esquila's* running time was exactly 105 hours, through some pretty hard going, and not a seam showed in her slick white sides after all the pounding, a great credit to her designers and builders. With the Cows buoy abeam off Shippan Point, the dying easterly backed to the southard, and with a slight lift in the fog we distinguished Commodore Stewart's *Cythera* close abeam bound for Oyster Bay, so there was a close second getting home with *Twilight* just astern, although the failing weather held her back until early next morning. The rest arrived a day or so later, and just by way of showing the doubters what the class could do the boats all participated in the opening regatta of the American Yacht Club in a hard northwester, using their cruising sails. Again on Sunday, the boats raced in Commodore Stewart's invitation race after a most delightful luncheon at the Seawanhaka Corinthian Yacht Club at Oyster Bay. Monday also brought the fleet to the line of the Harlem Yacht Club regatta, still using their cruising rigs, and even without light sails the 10-meters gave a very good demonstration of what they can be expected to do against the forty-footers and the "O" boats when properly tuned up and in racing trim.

Ajax I, built from the plans of *Kismet* in the November, 1926, issue of YACHTING by Lauri Wallace, of Jacksonville, Fla.

What Became of Captain Voss?

(*Continued from page 78*)

Yokohama. I called on the builder with the hope of seeing the lines, but Voss had taken them with him. Hearing from a friend of Voss that he had arrived at Chichijima (Bonin Islands) I sailed there, partly to see Voss and also to see the islands. I arrived on the Japanese S. S. *Chefu Maru* on February 12th, to find that Voss had left the day before, his next port of call being Guam.

The account I heard was that he never arrived at Guam, but that he and his friend were lost.

Tilikum II was built for sailing around the world. If Voss changed his mind and put back to San Francisco, it would be interesting to trace *Tilikum II*. I have a photo of her taken before she sailed from Yokohama. Voss' friends in Chichijima (most of them had been engaged with him in Pelagic sealing) considered *Tilikum II* very crank.

Perhaps you have already enquired of the Yacht Club of Yokohama, where Voss was well known. One friend of his there told me that the "Voyages" was edited by a German professor in Yokohama. Voss was very modest about his literary qualifications, and was much blue pencilled. It would be good indeed if the MS has survived and could be got hold of.

Sea Queen was in Yokohama Harbor when I was there in 1914. If Laffan, a shipschandler in Yokohama, is alive he might be able to give information.

T. L. EVE.

Oxford, Suffolk, England.

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The yachtsman who wants the most efficient, reliable and durable searchlight he can get will find the LEBBY is the light he wants. Objects from one-third to one mile away are readily picked up by the LEBBY. The LEBBY is manufactured of solid brass throughout and is guaranteed to withstand the most severe conditions.

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We also manufacture a complete line of running lights and cabin fixtures. Let us know your requirements.

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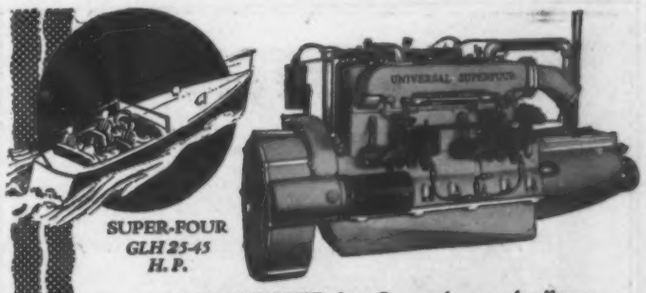

SUPER-FOUR
GLH 25-45 H. P.

ANNOUNCED last September as the "new thrill in boating", Universal Super-four has made good on every promise. Nothing else is like it — and the proof is overwhelming. In a compact space measuring only 17⅛ x 47⅞", this 4-cylinder, 4 cycle motor with reverse gear, electric starting, lighting and ignition all complete (less battery) weighs only 425 lbs. Gives speeds considered *absolutely unobtainable* except at 25 to 50% GREATER PRICE. Three models: GLS 15-30 H.P., GLH 25-45 H.P. and GLR 50 H.P. Racing Model 151 Class.

It's smaller brother, Universal Flexifour, far excels all former models. Lighter, sturdier, overall length reduced 5 inches. Advertised rating of 10-15 H.P. remains unchanged, but one full horse-power has actually been added throughout entire power curve. Starting equipment operated both front and rear. Only one place to oil.

Write for new 36-page catalog. State size and type of your boat.

UNIVERSAL MOTOR CO.
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New 1927
FLEXIFOUR
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10 to 50 Horse Power
MARINE MOTORS
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From the palatial "Delphine" to perky little "Wee Scots" (both entirely TIEBOUT equipped) we offer to builders of custom or standardized craft, both power and sail, a complete equipment service.

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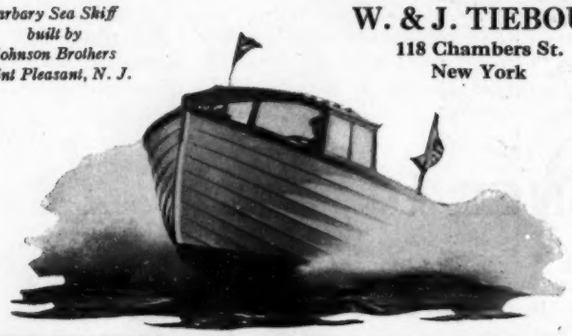

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Ratsey & Lapthorn
Sailmakers

All descriptions and sizes of best plough steel wire and linen rope kept in stock

City Island, New York City

The Pleon Yacht Club's Fortieth Anniversary

(*Continued from page 45*)

duced another Pleon victory. This time his brother, Harry B. Thayer, Jr., the present vice commodore of the Pleon, brought the club's colors to another triumph, and the fact that junior championships had grown tremendously in importance caused the fame of the organization to become nation-wide.

The recent history of the club since the World War is too bulky and too well known to need relating in detail. Among the high lights of recent years was the trip from Boston to Marblehead on the *America*, as she started her last voyage. On the water, besides the triumphs of the Thayer brothers, the excellent showing of the club's entrant, the *Scapa II*, sailed by James C. Gray, Jr., in last year's Manhassett Bay Cup match, the inauguration of the Midget Championship for the Salter Plate at Marblehead, and numerous victories in team matches, are the most noteworthy.

The old idea of a cruise was revived in 1922. The first year it was only a one-day affair aboard Frank C. Paine's *247*, a converted sub-chaser. The next year the club spent several days about Cape Ann at the time of the Gloucester Tercentenary. Hull and the South Shore were visited in 1924, while the next season the club went as far east as Portsmouth. Last year, Commodore Lawrence F. Percival, Jr., on board his father's 25-rater, *Sally XIII*, led the fleet, consisting of half a dozen or more good-sized yachts, to Provincetown for an enjoyable cruise.

Since the war the Pleon has worked hard for a club-house of its own. It succeeded once, in 1922, but for several years thereafter it remained unhoused. Last season the new commodore obtained for the year a small house and float near the causeway. This determination for a club-house has been rewarded, and this season the Pleon will occupy quarters in one of the buildings of the Corinthian Yacht Club.

Besides the prominent yachtsmen already mentioned, the rolls of the Pleon have contained the names of Lawrence F. Percival, Carl Hiller, Morton Adams, Ashley Adams, Harold S. Wheelock, Philip Benson, Sherman Damon, Lloyd Upton, John Yerxa, James C. Gray, Jr., Graydon Upton, A. Goodwin Wood, Margaret Wood, Ruth Yerxa (Mrs. Charles A. Welch), and Priscilla Rothwell, all well-known Corinthians of Massachusetts Bay. In addition to the former officers, the late Richard J. Salter, James M. Rothwell, Lawrence F. Percival, George Upton, John P. Squires, and Leonard M. Fowle have served the club in an advisory capacity.

The present officers of the Pleon Yacht Club are: Lawrence F. Percival, Jr., Commodore; Harry B. Thayer, Jr., Vice Commodore; Nathaniel M. Goodhue, Rear Commodore; Richard H. Thompson, Treasurer; Janet Rothwell, Secretary; Richard S. Thayer and Leonard M. Fowle, Jr., executive committee members in addition to the officers.

To celebrate the fortieth anniversary of the club, Commodore Percival appointed a special committee consisting of Nathaniel M. Goodhue, Leonard M. Fowle, Jr., and Graydon Upton, to make plans for its observance. They have decided on an elaborate celebration during the week of September 5th. On Labor Day the club will give, jointly with the Corinthian, a regular Marblehead championship race, which will be known as the Pleon Yacht Club's 40th Anniversary Regatta. The rest of the week's program will include three club races, a dance, a banquet and cup night, and numerous special events on the water.

It is doubtful if Arthur G. Wood and his associates, who founded the Pleon Yacht Club back before the "gay nineties," ever dreamed that the club would hold the prominence that it now does, or that it would come to be known as the first juvenile yachting organization in America.

A New Talking Machine

(*Continued from page 82*)

by the Victor Talking Machine Company, which combines unusual volume and tone quality with a finished appearance that will harmonize with the most elaborate cabin, yet retain its trim appearance despite the frequent handling to which it is subjected on yachts, motor boats or canoes.

The new instrument has an ingenious concealed amplifying chamber develope in

A new Victor Talking Machine for yacht use.

the Victor research laboratories. In fact, it is built throughout in accordance with an entirely new design, which gives the reproduction a full, lifelike tone, with greatly improved quality, range and volume.

It is encased in leather-finished fabric, in leather-figured dark blue, or brown with shark-skin texture. Metal fittings, both inside and out, are gold-finished. The turntable motor operates for eight minutes without rewinding. In size (an important consideration for yachtsmen) it is 7 inches high, 16½ inches wide and 13½ inches deep, and weighs only 22 pounds. The built-in record container holds twelve records, and opens automatically when the lid is lifted.

New Jersey Paint on the *Morrisey*

The Putnam Baffin Land Expedition is outfitting the schooner *Morrisey* at the Hoboken plant of the Tietjen & Lang Dry Dock Company, and she will soon leave for an extended scientific expedition in Arctic waters. Captain Robert A. Bartlett is supervising the work of getting the *Morrisey* in proper shape for the strenuous work that is planned.

No expense is being spared in fitting out the *Morrisey*, and it is worthy of mention that the bottom of this famous craft has been given two coats of red New Jersey Copper Paint. This paint is manufactured by the New Jersey Paint Works.

(*Continued from page 37*)

CLASS B. OUTBOARDS — Free-for-all
Two 3-mile heats

Blue Bird	800	21.62
Cute Craft Herself	722	21.30
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Manhattan Kid	578	19.81
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Lindy	392	17.75
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Hot Dog	320	18.71
Miss Lockwood	265	17.37
Penn Yan	225	18.11
Done	144	17.16
Flying Flapjack	189	17.49

(Owing to several protests in the outboard classes on equipment and amateur standing, final results cannot be given)

"Hot water or cold —it works swell with either!"

Your Best Pal on Any Outing

Roughing it is bully. But after you've been in camp two-three days, doesn't a nice clean shave feel great? *Barbasol's your best pal then.*

And you know if you let a couple of women within hailing distance of any summer resort, they'll get up a dance. You've just got to slick up and go. *And you want Barbasol then.*

Or is touring your game? Why, there isn't a run by car or train that isn't ended better by a cool, smooth Barbasol shave.

So take Barbasol with you on your trip. It helps you to travel light. No brush to pack or lose. Just your dandy old razor and *Barbasol!* Look here:

1. **Wash the face** (and leave it wet)
2. **Spread on Barbasol** (but don't rub in)
3. **Shave!**

And what a sporty shave! All silky smooth and cool. For Barbasol leaves the natural oils right in the skin—takes nothing away but the whiskers. Send for the sample—try Barbasol three times according to directions—and you'll be glad forever.

Mister, you're next!

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I enclose 10c. Please send trial tube and I'll give it a fair trial.

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